The Mining Journal
AND ATMOSPHERIC RAILWAY GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 561.—Vol. XVI.] LONDON: SATURDAY, MAY 23, 1846. [Price 6d.

COLLIERY IN NORTH STAFFORDSHIRE.—TO BE LET, for a term of years, an extensive tract of valuable COALS, in the parish of DRAYCOT-IN-THE-MOORS, in the county of Stafford, adjoining to that part of the parish of Cheadle in which the Delph-house, Harplow, and Draycot Cross Colliery are in full work.

By way of proving these mines, an engine of 20-horse power has been put down, and two shafts have been sunk of the depth of about 100 yards, to the top of the two-yard coal, under which there is every reason to suppose that the half-yard, the yard, the Litley, and the four-foot coals, being the strata worked by the adjoining collieries for many years, lie. It is supposed that other beds of coal, which it has not yet been necessary to bring into play, will be found beneath those above mentioned.

The Uttoxeter and Stoke branch of the North Staffordshire Railway will pass about a mile and a quarter from the colliery, and every facility for laying rails thereto will be afforded by the proprietor of the Draycot estate. By these means, in addition to the ordinary sale, a market will be opened to Uttoxeter, Tutbury, Derby, Burton-on-Trent, and other places in that direction; and to Longton (where coals are at present raised at great expense,) and the Staffordshire Potteries generally, in the other direction.

A lease for 21 years will be granted, and every encouragement given, to an enterprising tenant.—Draycot is seven miles from Stone, and three from Cheadle.

Mr. B. Bond, of Draycot, will shew the colliery, and give any other information; and reference may also be made to Mr. Cattlow, solicitor, Cheadle. 1

Cheadle, May 1, 1846.

SOUTH STAFFORDSHIRE.

FORGE AND MILL TO BE LET.—TO BE LET, for a term of years, all that well-known FORGE and MILL, situated at the LEVEL IRON-WORKS, near Brierley-hill, Staffordshire, consisting of a complete FORGE, with ENGINE of 26-horse power, two powerful helves, 16 puddling furnaces, and every other requisite; a large and complete MILL, with ENGINE upwards of 50-horse power, with squeezers for puddled balls, a train of two pair of puddled ball rolls, two trains of small rolls, trains of merchant bar rolls, hoop rolls, rail rolls, excellent cutter train for rods, numerous shears, drilling machine, five heating furnaces, and excellent lathe, and conveniences of every description. Two upright boilers are worked by the heating furnaces for the mill engine. The rolls, floor plates, furnaces, working tools, and other property belonging to the present tenant, may be taken at a valuation when possession is given.

As the present tenant, in consequence of a recent death, would have no objection to retire, any person wishing immediate possession of the works, may have the same in its present working state, together with the orders and connections of long standing, which are sufficient to find a regular demand for the produce of the works.

The works may be viewed, and all further particulars known, by application to Mr. R. Smith, the Priory, Dudley; or to Mr. James Holcroft, at the Level Mill. 2

TENDERS may be FORWARDED to me, on or before the 3d proximo, for SUPPLYING the following MINES—viz.:

WEST CARADON	SOUTH YEOLAND
GONAMENA	LARKHOLES
CRADDOCK MOOR	WHEAL SISTERS, and
TOKENBURY	WHEAL MARY CONSOLS,

For TWELVE MONTHS, from Midsummer next, with ENGINE COALS, of best quality, and with NORWAY TIMBER, half Dram and half Longsound, of good quality and average lengths; both articles to be delivered at the respective mines, free of expense, in such quantities as may be required, and when required. 3

Any mine, or mines, may be tendered for separately.

Should the agents not approve of the quality of any article sent in, the contractors will be required to remove the same; and, at the option of the respective adventurers, either to replace it by an article of approved quality, or to submit to a deduction from their bills of the amount of difference between the contract price and that at which the adventurers may obtain a supply from some other party; also, the amount of the like difference will be deducted from the contractors' bills in respect of all materials purchased elsewhere, in consequence of the contractors not sending in the materials when, and as, required.

Liskeard, 11th of Fifth Month (May), 1846. EDWARD A. CROUCH.

ON SALE.—No. 1. A SECOND-HAND double power condensing MARINE ENGINE, with cast-iron framing and side beams; cylinder 32½-in. diameter, 3-feet stroke; air-pump lined with brass—no boiler; 52-horse power, with 7 lbs. pressure on the square inch.

No. 2. A SECOND-HAND double power condensing MARINE ENGINE, with cast-iron framing and side beams; cylinder 31-in. diameter, 3-feet stroke; air-pump lined with brass—no boiler; 47-horse power, with 7 lbs. pressure on the square inch.

No. 3. A double power condensing MARINE ENGINE, quite NEW, but unfinished, with cast-iron framing and side beams; cylinder 43-in. diameter, 3½-feet stroke; 91-horse power, with 7 lbs. pressure on the square inch—no boiler.

No. 4. A double power condensing LAND, BEAM, WINDING ENGINE; cylinder 22-in. diameter, 4½-feet stroke; hand-gear, with button valves, parallel motion, fly-wheel, waggon boiler, with all its fittings; door, grate, dead plate, &c.; two large cast-iron bell cranks and pedestals, with strong wrought-iron connecting rods, for pumping water from two lifts of pumps, 100 yards deep; two rope wheels, suited for flat chains; apparatus to throw in and out of gear; pit-head pullies, &c.; 23-horse power, with 7 lbs. pressure on the square inch.

No. 5. A NEW direct action ENGINE, double power, suitable for a corn mill, or winding in a coal or lead mine, with improved spring packing for piston; ditto ditto for nozzle valves; cylinder 15-in. diameter, 3½-feet stroke; 28-horse power, with 30 lbs. pressure on the square inch—no boiler. 4

No. 6. A double power LAND BEAM ENGINE; cylinder 20½-in. diameter, 4-ft. stroke slide valve, parallel motion—no boiler, and quite NEW; 52-horse power, with 30 lbs. pressure on the square inch—no boiler.

No. 7. A double power BEAM WINDING ENGINE; cylinder 15½-in. diameter, 3½-ft. stroke, with a cast-iron portable frame; slide valve, hand-gear, parallel motion, flat-rope wheel, spur and pinion wheels for the same; 29-horse power, with 30 lbs. pressure on the square inch—no boiler.

No. 8. A NEW double power direct action ENGINE, made to drive a paper machine; cylinder 7½-in. diameter, 18-in. stroke, new boiler, with fittings on ditto; grate, door, dead plate, &c.; fly-wheel, &c.; 6½-horse power, with 30 lbs. pressure on the square inch.

No. 9. A SECOND-HAND PUMPING ENGINE, with a cylinder 48-in. diameter, 7-ft. stroke in the house, and the same in the pit, with air-pump condenser; hand-gear, cistern, &c.; pumping three lifts of pumps 100 yards; working barrels, 14 in. diameter—no boiler; 113-horse power, with 7 lbs. pressure on the square inch.

No. 10. A WINDING ENGINE, on a cast-iron portable frame, double power; cylinder 14½-in. diameter, 3½-ft. stroke; spur and pinion wheels, rope wheels, fly-wheel, with friction band on ditto; grate door, dead plate, &c., complete, and no worse than new; 26 horse power, with 30 lbs. pressure on the square inch—boiler and fittings for the same.

NEW BOILERS, of any shape, can BE MADE, at a SHORT NOTICE, to SUIT any of the ABOVE ENGINES.—For further information, apply to

EYTON AND CO.,

MOSTYN FOUNDRY, NEAR HOLYWELL, FLINTSHIRE.

CRADDOCK'S UNIVERSAL CONDENSING ENGINE. —The GREAT ADVANTAGES of WORKING HIGH-PRESSURE STEAM EXPANSIVELY, with a VACUUM, being now universally allowed, the MEANS of OBTAINING such ADVANTAGES, by the USE of the ABOVE INVENTION, cannot fail to interest all connected in any way with the profitable use of the steam-engine, whether for steam-vessels, locomotives, or stationary engines. By the extended use of the expansion principle, the above invention is capable of realising, under all circumstances, the economy hitherto confined to the Cornish engine, and even increasing the economy of it also—thus enabling steam-vessels to go twice the distance with the usual quantity of fuel, or the same distance with half the usual quantity; at the same time, owing to the greatly reduced weight and bulk of machinery, enabling vessels to carry a much greater amount of profitable freight.

As applied to the locomotive, it will produce 75 per cent. saving in coke, and dispense with the fender, and the present expensive means of obtaining a good supply of water for the use of the engine, as well as preventing all nuisance and loss from escape of steam.

By its application to the stationary engine, it effects a great economy of fuel, thereby rendering it profitably applicable to any locality for which engines are at present unsuited, owing to their great consumption of coal and water.

The above invention secures all the advantages obtainable by the use of a vacuum in condensing the steam by means of the atmosphere, when water for the purpose is not obtainable—thus realising all the advantages of the high-pressure expansive and condensing engine, at the same time only requiring a few gallons of water per day to supply waste and leakage from the boiler—(this has been practically proved to be less than one gallon per horse-power per day).

The above-mentioned great advantages are capable of such extensive application, and are based on such thoroughly established principles, as to claim the attention of all persons in any way connected with machinery or the steam-engine.

Messrs. Craddock and Co. have THREE ENGINES CONSTRUCTED on their IMPROVED PRINCIPLES, of the several powers of 10, 16, and 25-horse power—the two first of which may be seen at work by any gentleman, on presenting his card (between the hours of Ten and Four o'clock), at their 5

WORKS, No. 36, BROAD-STREET, BIRMINGHAM.

Messrs. Craddock and Co. will have the above engines at WORK, and OPEN for INSPECTION, from the 20th of May to the 20th of June, previous to their making more extended arrangements.—36, Broad-street, Birmingham.

Just published, in 8vo., price 2s.,

THE CHEMISTRY OF THE STEAM-ENGINE PRACTICALLY CONSIDERED: being the substance of a COURSE of LECTURES, delivered in the Theatre of the Philosophical Institution, Birmingham.

By THOMAS CRADDOCK.

Simpkin, Marshall, and Co., London, and all booksellers.

STEAM-ENGINES.—From 8 to 20-horse power ENGINES ALWAYS IN STOCK.

Apply to Mr. CAPPER, ENGINE-MAKER and FOUNDER, BIRMINGHAM. 6

Price.....£14 per horse-power.

EXTENSIVE SALE (for behoof of a sequestrated estate) of STEAM-ENGINES, MACHINERY, AND ENGINEERS' AND MACHINE-MAKERS' TOOLS, at the TAY FOUNDRY, DUNDEE.—There will BE SOLD, BY PUBLIC AUCTION, within the Tay Foundry, Trades'-lane, Dundee, on Wednesday, the 27th, and Thursday, the 28th, May next—the sale to commence at Eleven o'clock forenoon each day—the whole ENGINES, MACHINERY, and TOOLS, belonging to the sequestrated estate of Peter Borrie and Co., engineers, machine-makers, and founders.

CONSISTING OF

ONE condensing STEAM-ENGINE, of about 16-horse power, with two boilers.
ONE condensing STEAM-ENGINE, of 30-horse power, without boilers. 7
ONE high-pressure STEAM-ENGINE, on portable frame, geering, shafting, and belting.

Two new boilers, engineers' and machine-makers' tools of all kinds; heavy boring and turning lathes, large and small vertical boring machines, slotting machines, planing machines, self-acting and common turning lathes, slide rests, wheel-cutting engine, vices, anvils, large cranes, boiler-makers' tools, punching, rolling, and cutting machines.

Also, THE WHOLE STOCK OF VALUABLE PATTERNS IN THE WORKS.

The business carried on at the Tay Foundry by Messrs. Peter Borrie and Co., as engineers and machine-makers, was of a very extensive description; and the machinery and tools are for the most part new, and of the best and most powerful construction. The stock of patterns is very large, and includes a quantity of geering patterns, drums, pullies, and wheels. All these articles are well worthy of the attention of machine-makers and others.—The whole will be exposed in suitable lots.

The articles can be seen on the premises any time previous to the sale.

Printed catalogues will be ready for distribution by the 1st of May, and may be obtained from Archibald Borthwick, Esq., accountant, Edinburgh, trustee on the estate; William Neish, Esq., writer, Dundee; Messrs. William Taylor and Co., machine-makers, Dundee; and of John M. Beatts, auctioneer.

39, Reform-street, Dundee, April 23, 1846.

FOR SALE, BY AUCTION, AT THE TAY FOUNDRY, TRADES'-LANE, DUNDEE,

On WEDNESDAY and THURSDAY, the 27th and 28th MAY, 1846, 8

All the valuable STEAM-ENGINES, MACHINERY, ENGINEERS' and MACHINE-MAKERS' TOOLS and PATTERNS,

The property of Peter Borrie & Co., engineers, machine-makers, and founders, Dundee.

For catalogues, &c., apply to John M. Beatts, Dundee; or to James Thomson and Co., No. 6, Billiter-square, London.—May 18, 1846.

MONMOUTHSHIRE.

FOR SALE, BY AUCTION, by Mr. EDW. PRITCHARD (by direction of the mortgagee, under a power of sale contained in his mortgage deed), at the Westgate Inn, in the town of NEWPORT, in the said county, on Wednesday, June 10, 1846, unless previously disposed of by private contract, of which due notice will be given, all that valuable FREEHOLD ESTATE, called, or known, by the name of

BLAEN FFRWD-Y-WRACH, 9

Situate, and being, in the parish of Trevethin, in the said county; containing, by admeasurement, 52 acres (more or less), and abounding with all the VEINS OF COAL AND IRONSTONE found in the neighbourhood; in fact, a pit has been already sunk on the property, and the first two veins of coal proved. A smith's shop has been lately erected near the pit.

The coal is workable from Cwm-Tillery, as well as from the Varteg and Golynos—thus affording the choice of transit to the shipping port at Newport; which, by means of the existing communications, with a short branch of road therefrom to the property, would be rendered complete and easy. A power has been obtained to construct such branch from the Monmouthshire Canal Company's Railway, near the Varteg, to the premises.

For further particulars apply to Mr. Thomas Davies, Pontypool, the proprietor; Mr. W. Hughes, George-street, Pontypool; or to Mr. A. Waddington, solicitor, Usk.

Sale to commence precisely at Four o'clock in the afternoon.

WITHOUT RESERVE, TO CLOSE AN ACCOUNT.

CRONLLWYN SLATE QUARRY.—TO BE SOLD, BY AUCTION, by Messrs. T. WINSTANLEY and SONS, on Wednesday, the 10th day of June next, at One o'clock in the afternoon, at the Clarendon Rooms, South John-street, LIVERPOOL, unless previously disposed of by private contract, of which due notice will be given, the LEASE of that VALUABLE QUARRY, called the

CRONLLWYN SLATE QUARRY, 10

Situated at FISHGUARD, in Pembrokeshire, together with the BUILDINGS thereon erected, consisting of blacksmiths' and carpenters' shops, stables, powder magazine, &c. Also, the PLANT, WATER-WHEEL, and MACHINERY, on the premises, for conducting and carrying on the business in a complete and efficient manner; included in which are several HUNDRED YARDS of TRAMROAD, WAGGONS, BARROWS, assorted TOOLS and IMPLEMENTS, &c.

The quarry consists of nearly 300 acres of land. "It is thoroughly and scientifically opened." The slate is of excellent colour, and of a quality equal to any in the principality. Twenty-seven years of the lease remain unexpired, at the very moderate annual rental of £50.

Fishguard being one of the termini of the South Wales Railway, there is every probability of an increased demand. The shipping port is safe in all weathers, and is within two miles of the quarry, and affords great facility for exports.

A careful estimate of the outlay and profits, for the first year, has been made by the superintendent of the works, which shows a clear net gain of upwards of £500, which would annually increase, as the quarry shall be more fully opened. The weekly wages and expenses of working, for this first year, would be under £26.

Samples of the slate may be seen at the offices of the auctioneers, Church-street, where, or on application to Mr. James Wason, solicitor, Wason-buildings, 4, Harrington-street, Liverpool, further particulars may be had, and an inventory of the plant, &c., obtained.

TO BE PEREMPTORILY SOLD, pursuant to an order of the High Court of Chancery, made in a cause, Scale *v.* Fothergill, Thompson, and others, with the approbation of the Hon. Sir George Rose, one of the Masters of the said court, at the public sale-room of the said court, at Gray's Inn Coffee-house, Holborn, London, on Thurday, the 11th day of June, 1846, at Twelve for One o'clock, in one lot, the

LEASES, WORKS, ENGINES, LANDS, PLANT, AND EFFECTS, OF THE

ABERDARE IRON COMPANY, 11

in the county of Glamorgan; and a WHARF, at Cardiff, in the county of Glamorgan, belonging to the said company.

Particulars and conditions of sale may be had (gratis) at the said Master's chambers, in Southampton-buildings, Chancery-lane, London; of Messrs. Sharpe, Field, and Jackson, solicitors, 41, Bedford-row, London; of Messrs. Gregory and Son, solicitors, 12, Clement's Inn, London; of Mr. Davies, solicitor, Merthyr Tydvil, Glamorganshire; and of Messrs. Maybery, Williams, and Cobb, solicitors, Brecon.

SHARPE, FIELD, & JACKSON, 41, Bedford-row,
Agents for Wm. Davies, of Merthyr Tydvil, Glamorganshire.

TO COALOWNERS, MINERAL AGENTS, ENGINEERS, &c.—In consequence of concentrating the drainage of Walbottle Colliery, and lifting the whole of the water from one shaft, there will SHORTLY BE FOR SALE, the THREE present PUMPING ENGINES, with pumps, and all other apparatus belonging thereto—the whole of which are in good condition, and may be seen working until about the middle of next month—viz.:

AT THE CORONATION PIT.

A high-pressure single-acting ENGINE, cylinder 47 in. diameter, stroke 8 ft., with three cylindrical boilers, 28 ft. long by 7 ft. diameter. One of the same size, with two longitudinal tubes, 2 ft. diameter. Four working barrels, lined with copper, 12 in. diameter, and 340 yards of common pumps, with shears, crabs, shear legs, gins, &c. 12

AT THE KING PIT.

A double-acting condensing ENGINE, cylinder 47 in. diameter, stroke 6 ft., with three haystack boilers, 15 ft. diameter. Four working barrels—viz., 13, 14, 15, and 16 in. diameter, all lined with copper, and 34 yards of common pumps to each barrel, with shears, crabs, shear legs, &c.

AT THE DUKE PIT.

A single-acting high-pressure ENGINE, cylinder 32 in. diameter, stroke 4½ ft., with one boiler (cylindrical), 23 ft. long by 5½ ft. diameter. One working barrel, 14½ in. diameter, lined with copper, and one 12 in., lined with brass, with pumps, shears, &c.

Also, a great QUANTITY of ENGINE and OTHER very useful MATERIALS, besides several TONS of CAST and MALLEABLE IRON.

Apply to Messrs. R. and W. Hawthorn, engineers, Newcastle; or to Mr. Oliver, at the colliery.—Walbottle Colliery, near Newcastle, May 8, 1846.

TO BE SOLD, BY PRIVATE CONTRACT, a 12-inch STEAM-ENGINE, a BOILER, a WINDING APPARATUS, about TWO HUNDRED and FIFTY TONS of TRAM-PLATES and SLEEPERS, of different sizes; a WATER BALANCE MACHINE, complete; FIFTY-FIVE IRON BASKETS, NINETEEN small SHEET-IRON WAGGONS, SEVENTEEN ditto TON WAGGONS, TWELVE large ditto TWO-TON WAGGONS, FORTY-FOUR TRAM CARRIAGES for baskets, THIRTY-FIVE WOODEN WAGGONS, FOUR WEIGHING MACHINES, FOUR SHIPPING CRANES, and a large FIELD ROLLER. 13

The above are now lying at Landore, near Swansea, and may be seen on application to the agent, on the premises; and for further particulars, apply to the Landore Colliery Company, Swansea.—Dated May 13, 1846.

SAFETY FUSE FOR BLASTING ROCKS, SUBMARINE EXPLOSIONS, &c.

THE BRITISH AND FOREIGN SAFETY FUSE COMPANY 14

beg to inform the MANAGERS and AGENTS OF MINES, and OTHER PARTIES engaged in WORKS requiring the SAFETY FUSE, that they are now able to SUPPLY that ARTICLE in ANY QUANTITIES, and of such descriptions, as may be required.

The British and Foreign Safety Fuse Company have spared no expense, in order to make an article of the first quality; and they hope, by a strict attention to business, to merit a continuance of the orders which they may be favoured with.

Orders from any part of the kingdom will be executed with every possible dispatch, and particular care will be observed in packing fuse which may be wanted for exportation.

Dated Redruth, Cornwall, April 21, 1846.

MR. H. B. RYE (from Cornwall), MINE AND RAILWAY SHARE AGENT, 80, OLD BROAD STREET, LONDON. 15

Mines inspected, and every information may be obtained on application.

THOS. P. THOMAS, of the late firm of Rye and Thomas, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES, 80, *OLD BROAD-STREET, LONDON.* 16

JAMES LANE, SHARE AGENT. *HALL OF COMMERCE, LONDON.* 17

WILLIAM TRENERY, DEALER IN RAILWAY AND MINING SHARES.—ESTABLISHED TEN YEARS. *OFFICES, No. 50, THREADNEEDLE-STREET, LONDON.* 18

PAUL RABEY, Jun., and CO., MINE AND RAILWAY SHARE AGENTS. *OFFICE—No. 12, COPTHALL-COURT, LONDON.* 19

WILLIAM FOX and SON, No. 53, CASTLE-STREET, LIVERPOOL, have always on SALE PIG-IRON, RAILWAY BARS, CHAIRS, and IRON of every description.—TIN PLATES, WIRE, &c. 20

MESSRS. LAMOND, SMALE, and LAMOND'S PUBLIC SALE OF RAILWAY SHARES, &c., are HELD, at the Hall of Commerce, Threadneedle-street, every TUESDAY and FRIDAY, at One o'clock precisely.—Orders received until Four o'clock of the day prior to sale.—London, May 22, 1846. 21

LAMERHOOE WHEAL MARIA COPPER MINE:
WHEAL CONCORD LEAD AND COPPER MINE:
WHEAL WALTER COPPER AND LEAD MINE:
ROSCARROCK SILVER-LEAD MINE:
WHEAL MARY (in Calstock) COPPER MINE:
WHEAL KELLY CONSOLS COPPER AND LEAD MINES: 22

INFORMATION respecting the ABOVE MINES may be obtained, and the latest specimens inspected, on application to the secretary, who has ORIGINAL SHARES to DISPOSE OF in other new and valuable COPPER MINES, now bringing out.

JAMES CROFTS, Secretary.

4, King-street, Cheapside, London, May 22, 1846.

VIRTUOUS LADY COPPER MINE:
WHEAL BEDFORD COPPER MINE:
TAVY CONSOLS COPPER MINE:
GREAT WHEAL WILLIAMS COPPER, LEAD, & TIN MINES: 23

THE BUSINESS of the ABOVE MINES is CONDUCTED at No. 5, BUCKINGHAM-PLACE, STONEHOUSE, DEVONSHIRE, where all particulars may be obtained.

WALTER LOMER, Purser.

MINING OFFICES, REMOVED FROM 16, CORNHILL, to 1, THREE KING COURT, LOMBARD-STREET.—Mr. R. TREDINNICK (of Cornwall), having established PRACTICAL AGENTS and CORRESPONDENTS in every MINING DISTRICT, whereby he obtains early and accurate information respecting MINES, proffers his services to capitalists and adventurers in the PURCHASE and DISPOSAL of SHARES. 24

MINING PROPERTY.—CAPITALISTS who are disposed to INVEST in CORNISH and FOREIGN MINES, will find the present opportunity very favourable for so doing. From large sums having been lately diverted from such investments for railway speculations, standard mines are now selling at prices that will pay the purchaser 20 per cent. per annum for his outlay. There are also other mines that are on the eve of paying dividends, which can be recommended with confidence.

Applications to be made to Mr. JAMES HERRON, mining agent, No. 3, Adam's-court, Broad-street, London. 25

VENTON GIMPS MINING COMPANY.
(ON THE COST-BOOK SYSTEM.)
PROVISIONAL COMMITTEE OF MANAGEMENT.
JAMES HAY, Esq.
ABRAHAM LINDO MOCATTA, Esq.
GEORGE MACKAY, Esq.

OFFICE—No. 4, AUSTINFRIARS, LONDON.

This company is proposed to be formed for working the mining setts, called "Venton Gimps," situate in the parish of Peranzabuloe, in Cornwall, which extend about 400 fathoms, from east to west, on the well-known Chiverton lode. It was first secured in 1844 by the directors of the late Cornubian Company. A shaft was then sunk to the 18 fathom level, and excellent silver-lead ore raised, of which about 25 tons were sampled and sold during the month of December in that year, and again in January and February 1845; but while the tribute was set, going down upon the 18 fathom level, upon an improving lode worth 20*l.* per fathom, the great increase of water (in the absence of any pumping engine) brought the operations to a stand still, as may be seen, by referring to the reports which appeared in the *Mining Journal*, and also in *Herapath's Journal*, on the 1st and 8th of February, 1845.

The dissolution of the Cornubian Company having presented a most favourable opportunity of securing, for the effective prosecution of the works at Venton Gimps, the superior 50-inch cylinder engine, and other needful materials, the provisional committee at once entered into negociation with the late directors of that company, for the purpose of securing the setts and taking over, at a fair valuation, all the machinery and plant. These negociations having led to the desired result, the committee immediately appointed an experienced purser and a good working captain, and caused a public survey to be held on the 7th of last April, at the Venton Gimps Mine, when the setting was completed, on very favourable terms, for sinking a new engine-shaft, clearing out the foundation of the engine-house, boiler-house, &c., the carriage of the engine, &c., and every other necessary arrangement for the most active development of the mine.

The gentlemen forming the provisional committee, having satisfied themselves by the ore already raised and sampled, by the recent discoveries on the same lode further westward (by the Great Calestock Mining Company), and by the opinions of experienced captains resident in the neighbourhood, that these setts may, ere long, produce a most valuable silver-lead mine, did not hesitate to order at once the works to be thus vigorously begun; and they have also determined that the adventure shall not be hampered with unnecessary expenses in London, and that the body of shareholders shall, at no time, be shut out from a perfect knowledge of all the affairs of the mine.

For this purpose the cost-book system is to be frankly and fairly carried out, a committee of management appointed, composed of five shareholders, duly qualified, two to go out of office annually, but subject to re-election by the general meeting. The first committee of management to consist of the before-named gentlemen, viz.:—

JAMES HAY, Esq.
ABRAHAM LINDO MOCATTA, Esq.
GEORGE MACKAY, Esq. 26

And two other gentlemen duly qualified, to be elected by the shareholders at the first general meeting.

This management to be *wholly gratuitous, until the mine shall become a profitable adventure*, and then any remuneration to be determined by the votes of the shareholders.

In addition to the annual general meeting, the adventurers shall be convened regularly every two months throughout the year, for the audit of accounts, and the transaction of any other needful and incidental business.

The provisional committee have divided the company into 1000 shares, considering that to be, under all the circumstances, the best number for a company, expected to be chiefly composed of parties residing in London.

Estimates, which they have caused to be carefully prepared on the spot, by mining agents of great experience, shew that an outlay of about £5000 will suffice to work the mine and fairly develope its resources at the 50 fathom level; and, to meet the purchase of machinery, &c., a contribution of £2 per share will be at once required, and a further call of £1 on the 1st of next July.

The usual cost-book regulations for this company are being drawn up, and applications for shares must be sent in on or before the 30th of this present month.

So soon as a sufficient number of shareholders shall be obtained, the committee will call the first general meeting, and lay before it all such matters as may require their deliberation and approval.

By order of the provisional committee,
London, May 1, 1846. J. J. ISELIN, Hon. Sec.

N.B.—Applications for shares, or further particulars, may be obtained of Mr. Iselin, as above; or of Mr. Richard Thomas, 8, George-yard, Lombard-street.

POLKINGHORNE'S PATENT METHOD of TREATING TIN ORES.

Messrs. POLKINGHORNE & CO. beg to acquaint ADVENTURERS, and OTHERS interested, in TIN MINES, that they have just obtained HER MAJESTY'S LETTERS PATENT for the SOLE USE of a COMPOUND SOLUTION, effectually to CLEANSE TIN ORE from all extraneous metals—thereby increasing its value from £2 to £4 per ton.

Messrs. P. and Co. will be ready shortly to supply the article from their manufactory, *COPPERHOUSE, HAYLE, CORNWALL,* 27

in casks of 10 gallons each, which quantity is sufficient for a ton of ore.—Price 16s. per cask, and license 5s. per ton of ore.—N.B. Every information can be obtained by applying at the patentee's offices, 12, Clement's-lane, London.—April 4, 1846.

NOTICE TO THE PROPRIETORS AND SHAREHOLDERS OF MINES, SMELTING-WORKS, &c.

Messrs. MITCHELL and FIELD beg to inform the PUBLIC, that they have REMOVED from No. 5 A to No. 23, HAWLEY-ROAD, KENTISH TOWN, where they have erected a spacious LABORATORY, fitted expressly for the performance of all OPERATIONS CONNECTED WITH MINING.—Practical instruction to gentlemen in Assaying, Mineral Analysis, and Manufacturing Chemistry in general. 28

Assays and Analyses conducted as usual.

All communications to be addressed to Messrs. Mitchell and Field, assayers, No. 23, Hawley-road, Kentish Town.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY ..... Shropshire Mineral Railway—London Tavern, at Twelve for One.
South Yorkshire Coal Railway and Canal Co.—London Tavern, Twelve.
Goole and Doncaster Railway—London Tavern, at One.
South and Midlands Junction Railway—London Tavern, at One.

MONDAY ..... Louvain and Jemeppe Railway—London Tavern, at One.
Cameron's Coalbrook Steam Coal and Swansea and Loughor Railway—office, at One.
Waterford, Wexford, Wicklow, and Dublin Railway—Paddington Station, at Eleven.
London and Croydon Railway—London-bridge Terminus, at One.
Cork and Waterford Railway—London Tavern, at Twelve.

TUESDAY ..... South St. George Mining Company—on the mine, at Twelve.
Herne Bay Pier Company—King's Head, Poultry, at Two.
Oxford, Wolverhampton, and Worcester Railway—offices, at One.

WEDNESDAY... Wheal Lovell Mining Company—on the mine.
Promoter Life Assurance Company—office, half-past One.
National Bank of Ireland—office, at Twelve.

THURSDAY..... Wheal Concord Mining Company—on the mine, at Three.
Reversionary Interest Society—office, at half-past Eleven.
Dover and Deal Railway—Guildhall Hotel, at Twelve.
Larne, Belfast, and Ballymena Railway—London Tavern, at Twelve.
Lancaster and Carlisle Railway—Hall of Commerce, at Three.
Cambridge and Oxford Railway—Radley's Hotel, Blackfriars, at Two.

FRIDAY..... St. John del Rey Mining Company—office, at Two.
Callington Mining Company—office, at Two.
Exeter Great Western Railway—office, at Twelve.
Peninsular and Oriental Steam Navigation Company—offices, at One.
New Zealand Company—offices, at One.
Irish Great Western Railway—office, at One.
Direct London and Portsmouth Railway—London Tavern, at One.
Crown Life Assurance Company—office, at Twelve for One.

SATURDAY..... Hungerford Market Company—office, at One.
London and York Railway—Hall of Commerce, at Twelve for One.
St. Albans, Hatfield, and Hertford Junction Railway—office, Strand.
London, Salisbury, and Yeovil June. R'way—London Tavern, at Twelve.
Bandon and Bantry Railway—office, at Twelve.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

THE BRITISH IRON COMPANY.

The annual general meeting of this company was held at their offices, Threadneedle-street, on Wednesday, the 20th inst.

JOHN HORSLEY PALMER, Esq., in the chair.

The advertisement, convening the present, and the minutes of the last, meeting, being read, the CHAIRMAN regretted the cause of the absence of his respected colleague, Sir G. Larpent, Bart., the chairman of the directors, and read the following report to the meeting:—

REPORT.

The present is the annual general meeting of proprietors, held in pursuance of the deed of settlement and regulations of the company. At this meeting three directors—viz., Mr. Harrison, Mr. Barclay, and Mr. Harding—will go out of office; and, as it is considered right that the present number of directors should be continued till the dissolution of the company, and the requisite notices have been received from these gentlemen, resolutions will be proposed that they be again elected. The auditor going out of office is Mr. Moxon.

A report of the receipts and disbursements of the company in the half-year ending 31st Dec. last, and the balance-sheet of that date, both signed by two of the auditors, are laid upon the table. The balance-sheet shows the state of the company's affairs at that period to have been as follows—viz.:

Debts due by the company on promissory notes		£15,000	0 0
For interest on the same		134	19 2
And to other creditors		4,437	11 11
Making together		£19,572	11 1
Against which were the following assets—viz.:			
Cash and bills in hand	£4866 17 6		
Debts due to the company	1250 15 2—	6,117	12 8
Which, deducted, leaves the rate of debt at that period		£13,454	18 5

In the half-year prior to the 31st Dec. last, the amount received on account of previous calls was 6962*l.*, and the amount of promissory notes outstanding was reduced 18,000*l.*

The committee appointed by the proprietors, for the purpose of compromising and settling claims of the company for unpaid calls, have had specially before them, in all, 100 cases, comprising 4530 shares. In 10 of these, comprising 370 shares, the full claim has been received. In 40 cases, comprising 1454 shares, compositions have been agreed upon and received, amounting to 14,583*l.* In the other 50 cases, comprising 2606 shares, a very small sum indeed is likely to be recovered. The committee, with the assistance of the company's solicitors, have done every thing in their power to obtain some composition in these cases; and their failure in doing so, has arisen solely from the complete inability of nearly every one of the parties to make any payment whatever. It will be remembered, that many shares were acquired by parties at a time when they could be purchased at a low price, and when no further call upon them was expected; and (however much it is to be regretted) it has long been anticipated, as the proprietors are aware, that many parties would be found unequal to meet the later calls, which the unfortunate circumstances of the company have rendered it necessary to make.

The directors have at last the satisfaction of informing the proprietors, that, according to every reasonable view of the company's affairs, no further call will be required. The directors feel confident, that the receipts from the call of 1*l.* per share, lately made, with the sums still to be recovered of the arrears, which every exertion will be made to obtain, will meet all the liabilities of the company.

The directors are anxious that a dissolution of the company should take place at the earliest period consistent with the company's interests, and they will lose no time in taking the necessary steps for that purpose, as soon as the claims which are recoverable are received, and the remainder of the company's debts paid off.

The CHAIRMAN said, he deeply regretted the results of this unfortunate concern; but they had at last the satisfaction of finding it drawing to an end, though at a heavy loss to every person concerned. He could say, that every exertion had been made for the interest of the proprietors since the unfortunate reversal of the judgment of the House of Lords, over which, of course, they had no power or control. It was a great satisfaction, that a resuscitation of trade had taken place since those disastrous times, and he was sorry that a greater number of the proprietors had not been able to participate in the beneficial operations of the new company.

Mr. HICHENS, previously to the report being adopted, asked if any of the defaulters had been contumacious at all?—The CHAIRMAN said, the defaulters, who had at first resisted, had given way without letting the actions come to trial; but there were a few cases in which law proceedings were still pending.—The CHAIRMAN said, that every one had endeavoured to meet their obligations according to their means, except in those one or two cases. There had been no relaxation on the part of the directors, where they had the least reasonable expectation of recovery.

Mr. HICHENS thought they might fairly presume, that the money in hand, and that likely to be obtained, would liquidate all the existing claims at no distant period.

The CHAIRMAN replied, that the debts were not all liquidated at present—but no doubt was entertained, that there would be sufficient to do so.

Mr. DRANE would not wish to throw any discredit on this undertaking, but he thought it was premature to have called up the 1*l.* per share till the meeting had accounts before them, by which they could draw a conclusion how far that 1*l.* would be sufficient to pay the debts of the company;—through that not being done they were now placed in a wrong position. He knew a great many who had been obliged to pay; and those who would not come forward willingly to pay, or make some compromise, ought to be made to do so by the strong arm of the law. When they saw others never objecting to pay their call justly and honestly, those who objected should be compelled, or they might thus go on paying up to every sixpence, whilst the others paid nothing. (Hear, hear.)

The CHAIRMAN said he had not had an opportunity of generally attending the meetings of the compromise committee; but he could say, that the directors and committee had never relaxed in pressing those parties where there was any chance of success; and that in cases where there was not, it was useless, which was also the opinion of Mr. Freshfield.

Mr. DRANE observed, that a suggestion was agreed to by everybody at the last meeting, for having those names which had failed to compromise their debts, handed over to every member of the company. By that means, the gentleman on his right might know if A were able to pay—whilst the gentleman on his left might know if B were able to pay; by not doing so, they were deprived of these facilities.—Mr. MC LAURIN thought, if that knowledge were extended over a body of 50 or 60 persons, it would certainly be much better than confined to three or half-a-dozen.—Mr. HICHENS asked, if they could not publish that list at present?—A PROPRIETOR thought that, if all the debts should be liquidated, they would have a great difficulty in getting in the money due afterwards.—Mr. HICHENS moved a resolution for the purpose of publishing the names of the defaulters.—Mr. R. RICARDO thought, as there were so many persons utterly incapable of paying, it would be cruel to make their names publicly known.—Mr. DRANE thought it was still more cruel to press on the willing, than to publish the names of those who had never attempted to compromise a single shilling.—The CHAIRMAN observed, that he thought the information desired might be obtained by gentlemen coming to the office, where they could see who were defaulters.—A PROPRIETOR did not see how those who were not able to pay, could feel themselves injured at their names being published.—The CHAIRMAN: Whatever you pass here we must obey as directors.—A PROPRIETOR asked, if all the bonds were due, and if all were paid?—The CHAIRMAN replied, that they were not all paid yet, neither were they all due at present.

Mr. HICHENS said his motion did not relate to those who had compromised, for there they had got as much as they had a right to expect, but only to those who had paid nothing.

A DIRECTOR said, the business of the committee was not yet at an end, but they had got through by far the most important part of the business.

Mr. HICHENS said, as honest men, they were bound to protect the interest of the rest of the proprietors, and he hoped his motion would be submitted. (Hear, hear).

The resolution, as follows, was then read—viz.: "That a list of all proprietors, who within two months shall not have made payment or compromise of the calls due from them respectively, be sent to all the proprietors of the company—such list to state the address, number of shares, and amount due. That a copy of this resolution be sent to each defaulter forthwith,"—Mr. DRANE seconded the motion, which was carried on a show of hands.

Matthew Harrison, George P. Barclay, and Benjamin Harding, Esqs., were then continued directors of the company; Thomas Moxon, Esq., was also continued an auditor of the company.—A vote of thanks to the chairman having been passed unanimously, the meeting adjourned.

PROVINCIAL BANK OF IRELAND.

The twenty-first annual general meeting of the proprietors in the above bank was held at their house, 42, Old Broad-street, on Thursday, the 22d inst.; when, on the motion of M. ATTWOOD, Esq., seconded by O. FARRER, Esq., JOHN ALLISTON, Esq., was called to the chair.

The CHAIRMAN said,—Gentlemen, as this is the first time I have filled the chair upon such an occasion as the present, I trust you will extend to me the same indulgence as is usually accorded to a new member in another place, when he rises to address the house for the first time. But, gentlemen, we fear no division here: our interests are all one way, and I am sure we shall all vote on one side (hear, hear). That being the case, we shall now proceed with the first order of the day. It is my duty to call upon the secretary to read the advertisement by which you are now assembled.

The advertisement having been read by the secretary,

The CHAIRMAN said, it then fell upon him to state that four directors went out of office by rotation: those gentlemen were Edward Fletcher, Esq.; Thomas Masterman, Esq.; George Richard Robinson, Esq.; and John Young, Esq., M.P. By the deed of settlement, those gentlemen were eligible for re-election, and as no other candidate had been put in nomination, it became his duty to propose that those gentlemen be re-elected to the office of director.

The names were then put *seriatim*, and unanimously agreed to.

The CHAIRMAN: Now, gentlemen, we are all men of business here, therefore it will not require many words from me before I introduce our report to your notice. It is a plain unvarnished tale—a mere statement of facts; but, I am happy to say, they are of a gratifying nature. As this is our 21st anniversary, I trust you will think with me, that we have not only arrived at our majority, but that we have also arrived at the years of discretion. (Cheers). I will now call upon the secretary to read the report; and, if any gentleman has any question to put upon it, or any other subject, I shall be very happy to answer him afterwards.

The SECRETARY (Mr. Hewat) then read the report, which was as follows:—

REPORT.

In the report of last year the proprietors were informed that a bill was then before Parliament, intended to remove some of the restrictions of the law under which joint-stock banks were established in Ireland. The directors have now to state, that the bill referred to, in due course, passed both Houses of Parliament, and received the Royal Assent on the 21st July, 1845. It will be recollected that, with the exception of the Bank of Ireland, it was not heretofore lawful for any bank of issue, consisting of more than six partners, to carry on business in Dublin, or within 50 miles of it; but the Act of last session (the 8th and 9th Vict., cap. 37), with certain regulations as to the issue of notes, removes that restriction, and authorises joint-stock banks to transact all banking business in Dublin, and at every place within 50 miles thereof, as freely as they could previously do so at places beyond that distance. The Act came into operation from and after the 6th of December last, and the directors having previously made arrangements for taking advantage of its provisions, enlarged the Dublin agency into a branch bank, and began as soon as permitted by law to open accounts, and to issue notes, and transact all ordinary banking business in that city. The directors also considered it to be expedient to establish branches at four other places within the circle of 50 miles from Dublin, and they were accordingly opened as follows:—At NEWRY, on 19th January; DROGHEDA, on 26th January; DUNDALK, on 16th February; and CARLOW, on 2d March last. The directors have now to state, that the branch at Lurgan, in the county of Armagh, which was opened in October, 1834, has been found, after a prolonged trial, not to realise the expectations under which it was established, and it has, in consequence, been determined to discontinue it. The business of that branch is, accordingly, now in progress of being wound up. It is satisfactory to the directors to be enabled to state that the harvest for grain was, on the whole, a productive one in Ireland last year. The wheat crop, though not in general of fine quality, is considered to have been about an average in quantity. Barley was in some counties very good, and was generally considered a fair crop, but that grain is not now so much grown as formerly, and it is, therefore, a less important article in the aggregate produce of the country. Oats, which form the principal grain crop of Ireland, are almost universally admitted to have been both productive and good. It may, however, be remarked that, though the produce was large, the quantity of Irish oats imported into London since September last has been considerably less than in the corresponding period of the preceding years, which tends to confirm an opinion generally entertained, that a larger proportion than usual of the year's crop of grain is retained for consumption in Ireland, in consequence of the apprehended deficiency in the supply of potatoes. The directors consider it proper to state, that, while it is believed the condition of the farmers in Ireland is as satisfactory as in ordinary years, the comparatively high prices of provisions, and the want of employment, have caused distress amongst the labouring classes in some localities, and led to apprehensions of the continuance of that evil throughout the summer months. Local committees have been formed, and measures adopted in various districts, in order to relieve such distress by promoting employment, and providing food for those who may be found to require assistance; and the directors have felt it to be their duty to contribute, on the part of the bank, in aid of the local subscriptions for that purpose, in places where branches of the bank are established.

It is with much regret that the directors have now to inform the proprietors that, since the last annual meeting, their late respected secretary, Mr. James Marshall, has found it necessary to retire from that office, which, for so many years, he had held with satisfaction to them, and advantage to the establishment. It is is scarcely necessary to state to the proprietors, who have from year to year attended these meetings, that the great practical experience in the business of banking which Mr. Marshall had acquired in Scotland, previous to his introduction to the directors in the year 1825, rendered his able and indefatigable services most useful to them in the formation and subsequent management of the Provincial Bank of Ireland. His advancing years having required relaxation from the duties of so laborious a situation, he last summer tendered his resignation; and it having been accepted by the court, the directors, in consideration of his long, faithful, and valuable services to the bank, made such arrangements for his retirement at Michaelmas last, as the peculiar circumstances of the case appeared to call for.

Consequent upon the retirement of Mr. Marshall, the directors appointed Mr. Robert Murray to be chief officer of the establishment. Mr. Murray, who has been for a period exceeding 20 years in the confidential employment of the bank, continues to reside in Dublin, having, in addition to the principal management of the Dublin branch, the general superintendence, under the directors, of all the business of the bank in Ireland.

The office of secretary the directors have filled up by the appointment of Mr. Thomas Hewat, who has been in the service of the bank for upwards of 16 years, and who, for the past three years, acted as assistant to Mr. Marshall.

The directors have now to request the attention of the meeting to the following statement, and it is with much gratification that they submit to the proprietors so satisfactory a result of the business of the bank for the past year.

The account submitted to the yearly general meting in May, 1845, showed the amount of Rest, or undivided profits, at 29th March, 1845, to be		£104,134	8 5
From which has been deducted the amount of two half-yearly dividends paid to the proprietors—viz., at Midsummer, 1845, 4 per cent., 21,600*l.*; Christmas, 1845, 4 per cent., 21,600*l.*—together		43,200	0 0
Leaving a balance of		£ 60,934	8 5
To which there has since been added the amount of net profits for the year ending on the 28th, being the last Saturday of March, 1846, after deducting property tax, and all expenses, and providing for all bad and doubtful debts		53,986	1 11
Thus showing the "Rest," or amount of undivided profits, at the 28th of March, 1846, to be		£114,923	10 4

To this statement of the present position of the bank's affairs the directors have only, in conclusion, to add that it is their intention to pay to the proprietors in July next, the usual dividend of 4 per cent. for the half year ending at Midsummer, 1846, being at the rate of 8 per cent. per annum on the paid-up capital of the bank; or 1*l.* on each share of 100*l.*, and 8*s.* on each share of 10*l.*; and they purpose also to pay the property tax for the proprietors as heretofore.

A PROPRIETOR said, it had been usual when the "rest" amounted to the sum at which it now stood, that a bonus was given to the proprietors—either a bonus or an extraordinary dividend. The proprietors were benefitted in some way.

The CHAIRMAN: I beg the hon. proprietor to believe that the directors are as fond of a bonus as any of the proprietors—(a laugh); but by pursuing a steady, a safe, and a proper course of conduct, we have gained the confidence of the public. Our rock of safety is our reserve fund, and I trust we shall always preserve it, and by so doing we shall preserve that confidence which we now enjoy. You must bear in mind that we have lately established five new branches. We cannot yet say exactly what the affect of that step may be, but you may depend upon it that whatever can be done prudently will be done by the directors.

Capt. T. L. LEWIS, R.E., trusted that, although a stranger in that room, he might be allowed to put a question to the chairman. He had heard the report read with much pleasure: he considered it as a most favourable one: he wished to know, if it were thought prudent to tell, whether the directors had thought it right to compensate Mr. Marshall by giving him something for the services which he had rendered to the bank, and which the directors had honourably denominated "faithful services?"

The CHAIRMAN: The directors had fully considered the subject named by the gallant captain, and they had gone as far as they considered their duty allowed them, to reward Mr. Marshall for his very faithful services to the bank, and he trusted they had rendered him comfortable.—(Several of the directors, "State the sum").—Well, he had no objection. Mr. Marshall's salary had risen progressively, until it reached 1200*l.* per annum, which included an allowance of 200*l.* for a house. The bank now gave him 1000*l.* per annum—so that, in fact, the directors had allowed Mr. Marshall to retire upon his full salary. (Cheers).

A. T. CORFE, Esq. (of Salisbury), had such perfect confidence in the directors that he had not a word to say. As regarded the remark an hon. proprietor had made in respect of a bonus, they (the proprietors) must remember that the directors had just opened some new branches, and that, consequently, they required more means. Had it not been so, he would have cordially joined with the hon. proprietor; but as they increased their business they increased their outlay, and necessarily required larger means. Having been a proprietor from the institution of the bank, he was perfectly aware of the justice of what had fallen from the hon. chairman, but after all it was as broad as it was long. Every one who was connected with the bank in 1836, knew that the proprietors then got a bonus, but where were the shares afterwards? A bonus would reduce the price of shares to a greater extent than it ought. They all knew that a bonus of 1*l.* a share would reduce the price of the shares 2*l.*, or perhaps more. He was convinced the directors were right, and he for one owed them thanks.

The CHAIRMAN then put the motion, that the report which had been read be adopted, printed, and circulated amongst the proprietors, which was unanimously agreed to.

JAMES BARTON, Esq. (of Liverpool), said it would be very desirable, that an error in regard to the number of their shares, which had crept into a list, published in London, called *Wetenhall's List*, should be corrected.—(Several proprietors—"That list always quotes our prices wrong.")—The number of shares was stated there at 40,000 shares of 25*l.* each. He had been a proprietor from the beginning, and knew perfectly well that the shares were only 20,000 of 25*l.* each, and 4000 shares of 10*l.* each.

The CHAIRMAN said steps should be taken to put the publisher of that list in possession of the facts.

DAVID ALLAN, Esq., hoped the proprietors would not separate without doing that which was a mere act of justice—they ought at least to give thanks where thanks were due. (Hear, hear). He begged to move—"That the thanks of the meeting be given to the directors, and to the chairman, for his conduct while presiding over that meeting."—The motion having been seconded, was put by the proposer, and carried with acclamation.

The CHAIRMAN returned thanks for himself and his brother directors. Every meeting ever since the bank was formed had been a bond of union between the proprietors and the directors—it was a bond renewed every year, and he sincerely trusted that it was a union which would never be repealed. (A laugh, and cheers).

Capt. PORTER, R.N., trusted he might, upon that occasion, not be thought to be out of order in asking leave to propose that the special thanks of the proprietors be given to Mr. Marshall—(cheers)—to whom they all owed so much. His duties had been long and arduous, and, on many occasions, very unpleasant, to him especially, because he had often had occasions to find fault, and to do so pained his kind heart. He knew that, in forming such an establishment as theirs, something of that kind would occur—no doubt the directors discouraged it as much as possible; but in establishments like their branches, it was sometimes really indispensable; but whenever occasion arose, he knew that Mr. Marshall performed that, the most invidious and unpleasant, part of his duty in the most conciliatory manner possible. Under the guidance of the directors, he had placed their bank in a high position. It was only the other day he was at a meeting of another bank, where they boasted that they had framed their accounts in the same manner as those of the Provincial Bank of Ireland—(cheers)—they were thought the very standard of perfection, and were looked up to as a guide by all engaged in the same business. It was probably the last time they might have it in their power to mark their sense of his long and faithful services; therefore, with leave he would move, "That the special thanks of the proprietors are due, and are hereby given, to James Marshall, Esq., the late secretary to the bank."—Several proprietors seconded the motion.

The CHAIRMAN said, the directors cordially concurred in it, and it was passed with acclamation.—The meeting then separated.

THE CORNWALL RAILWAY COMPANY.

A meeting of scripholders was held in the Assembly-rooms, Truro, on Friday, the 15th inst., for the purpose of taking into consideration a copy of a bill for making a railway from Plymouth to Falmouth, and other places, in the county of Cornwall. At noon, the hour of meeting, nearly 200 shareholders, comprising some of the most influential gentlemen of the county, had assembled.

J. T. TREFFRY, Esq., the chairman of the committee of management having taken the chair, the secretary Mr. P. P. SMITH, read the notice calling the meeting, and afterwards the heads of the proposed bill for constructing a railroad, &c.

The CHAIRMAN then said, they were there assembled in conformity with the new regulations of Parliament, for the purpose of weeding out lines of a speculative from a *bonâ fide* character. He considered, and maintained, that their line belonged to the latter class. It was undertaken upon public grounds, and the same principle had guided them throughout their labours; and he felt assured that the issue of their meeting that day would afford ample reply to every assertion of a contrary character. Their secretary had received instructions of assent to the extent of 10,050 shares, and only dissents to the amount of 500. It afforded him much satisfaction to state, that the contemplated line between Doubleboys and Launceston, (of which, at their last meeting, he could offer very little information,) was much better than they could have expected, and afforded him every satisfaction. He was glad to see such a large number of shareholders present, and if their determination should be expressed in the manner he anticipated, he felt convinced that the Cornwall Railway Bill would become law this session.

Mr. J. MARRIOTT then rose and observed, that, representing the interest held in the company by Lady Bassett, besides holding a large number of shares himself, he, with much pleasure, moved the first resolution, feeling convinced that it would materially tend to advance the interests of the county, if the line were carried out. Mr. Marriott then read the following resolution:—"That the draft of the bill for making a railway and other works from Plymouth to Falmouth, and other places in the county of Cornwall, to be called 'the Cornwall Railway,' which has been submitted to this meeting of holders of scrip, and of bankers' receipts, be approved; and that the committee of management be authorised to prosecute the same in the present session, and to introduce, or submit to the introduction therein, of such alterations, modifications, and additional provisions, as they shall deem expedient or conducive to the success of the undertaking, and the interests of the shareholders."

Mr. W. M. TWEEDY seconded the resolution; and, in a speech which we have not space to give in detail, stated the principles upon which the Cornwall line was based. Their first object was to afford local communication, next national defence, and, lastly, to form such a line as will best promote an extension of branches hereafter. (Hear.) In point of local support, it would scarcely be believed, that the number of shares held in the county in the late Central line was rather under 3000, and representing less than 80,000*l.*; whilst the Cornwall Railway, with the West Cornwall, was supported to the extent of 300,000*l.* Mr Tweedy then read a list of the noblemen and gentry who had furnished the committee with their names and authority to proceed with the bill, among which were—the Earl of Falmouth, Lord Vivian, Sir C. Lemon, Sir W. Molesworth, Hon. G. Fortescue, Sir Colman Rashleigh, Sir A. Buller, Mr. Robartes, Mr. Praed, &c., &c. With regard to the rumours and reports which were abroad, his answer was, look at the names of their committee of management, which gave a guarantee for everything they could expect or desire.

Mr. T. WOOLLCOMBE then rose in support of the resolution, and stated that he was deputed to represent the South Devon, the Bristol and Exeter, and the Great Western Companies—and availed himself of the opportunity to deny the oft-repeated fabrication, that the Great Western, or any of the associated companies, had ever wished to domineer in any way over the Cornwall Company. They had pursued a contrary course, and studiously avoided any proceeding which might bear such construction. They could exercise no control over their committee of management; and as an evidence of their disinterestedness, when the reply of the Cornwall Company to the proposition of the Central committee was submitted for their approval, they distinctly refused to assent to any communication which had not received the previous approval of Lord Falmouth and Sir C. Lemon.

It was immediately submitted to those gentlemen and received their assent, and other members of the Cornwall board, who saw it afterwards, declared that no other answer could be given. (Hear, hear.) With regard to the delay in the opening of the South Devon Line, there were many little matters in the *minutiæ* of railway proceedings which an unprofessional person could not explain, but which, nevertheless, might cause delay; but he had no doubt, the directors by this time had appointed the day on which it should be opened. (Cheers.) General Pasley, the Government Inspector, was down inspecting the line on Monday, and expressed his entire approval of the works. (Cheers.) He would here make a few remarks on the reports which had been circulated of the failure of the atmospheric principle. Nothing was more wickedly false. There was an organised opposition to the system, and he knew whence the fabrications emanated; but he was glad to say, that a high authority in such matters had seen no failure to induce him to alter his opinion of its practicability, and especially to the South Devon Line. In a later period of the meeting, Mr. Woollcombe stated, he had by that day's post received Mr. Brunel's authority for stating, that he had given the experiments on the Croydon Line his undivided attention, which had all succeeded, and fully answered the sanguine expectations of its promoters. The meeting was here detained for the numbers to be made up, which occupied some half an hour; when Mr. SMITH, the secretary, came forward and announced that he had just received a large parcel of proxies (which must necessarily detain the meeting some few minutes longer) amongst which, he was happy to state, was Mr. Turner's proxy for his shares, amounting to 1000. (Cheers.)

Mr. TREFFRY begged to inform the shareholders, that the meeting here to-day had been most satisfactory. The number of assents were 17,574½, making in amount 878,725*l.*; the dissents were—525, making in amount, 26,250*l.*; and the greater part of these dissentients belonged to four persons who, he was happy to say, were none of them Cornishmen. (Cheers.)

Rev. W. WEBBER concurred most cordially in the resolution he had to propose—"That the best thanks of the meeting be given to the committee of management for their past services, and that they had full confidence in their future perseverance."

Dr. BARHAM, in seconding the resolution, said, after the scrutiny of the scrip, he could not hesitate to say, that they were bound to record a vote of thanks to the committee of this company. Their company was an association of county men, who had, after years of anxious search, adopted that line which would be the best for the county—a line which would afford every local accommodation, and pay a fair remuneration to those who had embarked their capital in it. (Hear, hear.) He hoped the opposition which had been manifested against them had now entirely subsided; he did not see how it could be otherwise, for circumstances had much changed since last year; then, during the fever-heat of railway mania, money could be easily raised for rival projects; but now, the reaction operating strongly the other way, there was not the slightest chance of reviving such a scheme as the Central Railway. (Hear.) He trusted that company would see their position, and allow them to appeal to their best feelings for the county's interest, to throw aside all parties and connections, having no common local interest with them, and unite with this company cordially and energetically to attain the only line practicable. (Hear.) He himself was confident of success, for there was no project before either the public or House of Commons to prevent it; and he had the strongest assurances in his own mind, that the gentlemen in whom they had confided, would persevere and do the utmost for their interests; and, should they be unsuccessful, which he did not for a moment suppose, he should be then, as now, ready to accord them his sincere thanks for their honesty and undeviating attention to their interests.—The resolution was then put, and carried unanimously.

Mr. WOOLLCOMBE wished to inform the meeting, for the express purpose of preventing any opinion being entertained, that the associated companies had an undue influence in the carrying of the votes which had been just read from the chair, that the interest taken up by the companies amounted to 337,500*l.*, whilst that of the public votes amounted to 540,225*l.*

Mr. P. MORRISON, of London, begged to state, that he came to that meeting without having the least idea of the unanimity that existed in the county for the carrying out of the Cornwall Line. He was entrusted with a large number of proxies, but, from the unanimous feeling he had witnessed to-day, he had not used them. His own he had registered "assent;" and the others he had been entrusted with, he should return without registering their "assent," or "dissent." He had a very gratifying duty left him to discharge, which he felt satisfied would be responded to by all present—that was, their thanks to the chairman, who had so ably fulfilled the duties of the day.

Capt. ROGERS seconded the resolution, which was carried unanimously.

The CHAIRMAN returned thanks.

Mr. ELLIS proposed a vote of thanks to the secretary, who had so ably discharged his duty.—Mr. A. FOX seconded the resolution.—Mr. SMITH returned thanks, and the meeting broke up.—*Falmouth Packet.*

SLIGO AND SHANNON RAILWAY COMPANY.

A special general meeting of the scripholders in this company was held at the offices, Winchester House, Old Broad-street, on Monday, the 18th inst., WILLIAM ORMSBY GORE, Jun., Esq., in the chair.

Mr. A. GOLE (the secretary) having read the advertisement convening the meeting, the CHAIRMAN said, it required the representation of 1334 scrip shares to constitute a legal meeting; and as there were then present 1447 shares, the meeting was in every respect legal.—The SOLICITOR to the company then read the marginal notes in the bill, offering to read any clause which the meeting might require.—The CHAIRMAN read a report, which the diretors had prepared, which stated that, after the necessary expenses incurred had been liquidated, they should have in hand a balance of only 686*l.* 5*s.*—a sum totally inadequate to meet the future preliminary expenses; the directors had, therefore, on their own responsibility, raised a sum of 1500*l.* The scheme was on a small scale and entirely unopposed; all they were now in debt was to the London and Irish solicitors, while the former had been paid up to the period of signing the bill, and the latter had had 100*l.* on account—the whole of the small outstanding debts did not amount to 150*l.* They had passed the Standing Orders of the House, and were now prepared for the third reading. The order for the additional 5 per cent. deposit having come upon them unawares, no provision had originally been made for it; when the call was made the Irish shareholders had responded to it, the English only partially so, about 150 shares being paid upon. He then observed, that it was the recommendation of the directors to proceed with the bill, and should be glad to hear any suggestion. The traffic, even as it existed at present, promised a high rate of interest; the greatest activity prevailed on the banks of the Shannon, in the erection of mills, &c.; and the greatest interest in the success of the scheme was manifested by the merchants of Sligo, who held one-third of the scrip.

Mr. W. KERNAGHAN, of Sligo, then came forward and stated, he had been called to the chair at a meeting at Sligo, in which the greatest confidence was expressed in the soundness of the undertaking; he then read the resolutions carried at the meeting, expressive of such general feeling—and stated, that he had been deputed by that meeting, to appear at this meeting, and should be happy to answer any questions.

At this stage of the proceedings, a gentleman named Snell entered the room, and inquired as to the amount paid of the 5 per cent. additional deposit?—The CHAIRMAN explained to him, as stated in the report.—On the CHAIRMAN putting the motion to enable the directors to proceed with their bill,—Mr. SNELL had no opposition to offer to the measure in itself, but it would be totally impossible to get money to proceed, even if they obtained their bill—as while so many undertakings were afloat, it was impossible holders could pay calls on all of them; he wished to postpone the measure for two or three years, and moved that the meeting do adjourn.—The original motion for proceeding was, however, carried by the holders of 1572 shares to 325 dissentients, being a majority of 1247.—A formal resolution was then passed, giving the chairman and solicitor power to affix their signatures to the Bill.—Mr. GALT stated, that he was glad to have an opportunity of explaining some points on which Mr. Snell appeared to found his objections. It was well known that the River Shannon was the largest in the United Kingdom, and this railway was absolutely necessary to develope the full benefits of its navigation; it would unite Lough Gill and Lough Allen, be only 10 or 12 miles in length, and open up the richest part of Ireland; it would be, perhaps, the cheapest constructed line in the kingdom, being only about 7000*l.* a mile. It had the entire support of the landowners, and was so peculiarly situated, that the effects of the panic, which ruined many companies, and put a stop to their proceedings, would actually benefit their line: the Enniskillen and Sligo Line, and the Longford Railway had been abandoned; and the whole of the traffic, which they would have had, must now come on their line. The directors had no intention of pressing the works; all they wanted was the additional 5 per cent. to complete the preliminary expenses—then, during the present year, they should probably not call for a shilling; but in the ensuing spring, if the money market was satisfactory, they should convene a meeting of the shareholders, and propose a call, for the purpose of going on with the works.—A vote of thanks was then awarded to the chairman and directors, and the meeting broke up.

PILBROW'S ATMOSPHERIC RAILWAY AND CANAL PROPULSION COMPANY.

A meeting of the shareholders was held at the London Tavern, on Friday, the 22d inst., when a report of the directors was submitted.—A question having arisen as to the right of parties being present, and taking part in the proceedings, unless they should have first executed the Deed of Settlement, and paid all calls made on the shares held by them, the opinion of the Attorney-General and Mr. Malins had been taken thereon, who expressed themselves clearly, that no party had a right to be present, or take part in the proceedings, unless he had signed the Deed of Settlement, or held under a title derived therefrom, the transfer having been duly registered, and thus proscribing the holders of scrip. The effect of this announcement may be readily imagined, and many were the expressions of disapprobation on the part of those who were thus denounced.

After a considerable time having elapsed, the SOLICITOR of the company (Mr. White), announced that the meeting, although called for one o'clock, would not be held until two o'clock. Shortly after which hour, the chair was taken by the Earl of ESSEX, who, in submitting to the meeting the report, expressed his regret that it was not of that favourable character which he could, in common with those assembled, have desired—while he begged most distinctly to deny, that in the course taken by his co-directors and himself, they had been influenced by any pecuniary consideration—or aught otherwise than a desire to promote the objects for which they had become associated.

Mr. WHITE proceeded to read the report, which, from its nature, could only be considered as interesting to those more immediately connected with the operations, or rather those projected by the company—while the absence of the secretary, under peculiar circumstances, and who, it appeared, had retained the register-book, rendered it impracticable to afford a clear statement of the company's affairs.

Mr. EDWARDS (auditor), read the balance-sheet, from which it appeared, that but a trifling balance remained in hand. A great number of shares had been issued in London, Bristol, and Liverpool, bearing the signature of Mr. Collins (the secretary), which were not admitted by the directors as being *bonâ fide*—a statement which naturally excited much warmth of feeling on the part of several shareholders present.

Mr. COLLINS expressed himself hurt by the remarks which had been made; he felt that his position, under the peculiar circumstances in which he was placed, was by no means enviable—while he deemed it right to state, that his books had been taken possession of by the solicitors of the company. He proceeded to enter at some length as to the pecuniary affairs of the company, wherein he might be supposed to be implicated, while he observed 4000 shares were signed by the chairman, and sent to Liverpool, for the purpose of being there sold.

The Earl of ESSEX observed on this point, that being obliged to leave England on account of his health, he had previously to his departure, he must admit, incautiously signed some shares, which he was given to understand were to be sent to Liverpool, and to which he could offer no objection, entertaining so high an opinion, as he did, of the atmospheric system; but, on his return in September, having had reason to arrive at the conclusion that the undertaking could not be carried out successfully, he had given instructions that no further shares should be issued.

Mr. COLLINS stated, that the new patent, which would be obtained in July, would undoubtedly prove highly successful.—Mr. WHITE suggested that it might be prudent, before proceeding further, to nominate a committee, with the view of examining the accounts; whereon the noble CHAIRMAN expressed his readiness, as well as that of the Earl of Bessborough, to subscribe 1000*l.* each to relieve the shareholders, the liabilities, however, amounting, so far as we understood, to a sum not exceeding 250*l.*—In the end, a committee of five was appointed, to examine the accounts, and the meeting was adjourned until the 25th June.—A vote of thanks was unanimously passed to the chairman, whose honourable conduct, and that of others associated with him, were duly acknowledged, while some remarks, of a free nature, were made, as regarded other parties.

NEWCASTLE AND CARLISLE RAILWAY.

A special general meeting of proprietors was held at Newcastle on Tuesday last, for the purpose of considering the bill now before Parliament, authorising the formation of branches to Alston and North Tyne, and other works in connection with the line.—Mr. M. PLUMMER (chairman of the directors) presided.—The CHAIRMAN said, the estimated cost of the formation of the Alston branch was from 200,000*l.* to 210,000*l.*, and the expected revenue about 18,000*l.*; the North Tyne branch was estimated at from 250,000*l.* to 260,000*l.*, and the revenue about 12,600*l.*—Captain COULSON proposed a resolution, sanctioning the branches and other steps contemplated by the bill; which was seconded by Mr. THOMAS FENWICK.—Some of the shareholders expressed doubts as to the propriety of proceeding with the Bellingham (North Tyne) branch, and a good deal of discussion followed. On a division, votes representing 290,000*l.* of capital appeared in favour of the motion, while the votes against it represented 6860*l.* It was, therefore, carried.—In compliance with a suggestion, however, the CHAIRMAN intimated that the directors would further consider all the circumstances connected with the Bellingham branch, before commencing the formation of it.

THE BRITISH PATENT NAPTHA COMPANY.—A meeting of the above company was held at the Royal Hotel, Plymouth, on Monday, the 10th inst.—P. ADAMS, Esq., in the chair. The report of the directors was presented, which stated that arrangements had been concluded with the Duchy for grants of land, for cutting peat on Dartmoor, and for a large portion of the Dartmoor Prisons, for the works. Plans were also presented for a railway, two miles in length, from the works to the bog, where the peat is obtained, and for the erection of retorts, &c. The report was received and adopted, and a building committee appointed. Samples of the products, recently obtained at the experimental operations in Tor Royal, were exhibited, including two kinds of oil; one of which is used as a substitute for camphine, and is stated to possess great advantages.

COLLINS'S ATMOSPHERIC RAILWAY TUBE WITHOUT A VALVE.—At the Society of Arts, on Wednesday last, a paper was read on a new atmospheric tube for railways, the invention of Mr. Collins, and was illustrated by a model railway mounted on tressels, and extending about ⅗ths the length of the society's room, the tube being 1⅝ inches in diameter. The invention is certainly most ingenious; but how far it is calculated to secure the three great desiderata in railway practice—safety, speed, and economy—can only be proved on a large scale. The idea has been taken from the well-known every-day operation of sewing. In taking a stitch, it will be remembered, the centre of the needle will be on the under side of the cloth, while the two ends are on the upper; and imagining the point of the needle continually entering the cloth, before the eye leaves the previous orifice, a conception may be formed of the principle of this atmospheric tube. The tube may be considered a compound one; in the model two feet are perfectly cylindrical, and two feet with a projection on the upper surface—forming, in the interior, a channel for the rod attached to the carriage to pass through, the two forms alternating throughout its length. These channels are closed at both ends by slide valves, which are opened and shut by the carriage on passing, through the action of a cam on a friction roller, attached to each valve; the alternate spaces of cylindrical and channelled tube would in practice be 25 feet long each—thus requiring about 210 sets of channels and valves per mile. Attached to the piston is a rod, the same length as that attached to the carriage outside, on which are springs, acting on catches, which lock into slots in the bar outside. On the point of the bar arriving at the end of one of the channels, the front catch is immediately released, and the propulsion continued by the hinder ones in succession, until the point again arrives at the opening of the next channel; when the front catch immediately again takes its hold—the bar being of such length, that the hinder end is never *out of*, until the front point is *in* gear: thus the bar threads its way along, alternately in and out of the pipe, and of course drawing the train with it. The arrangement for opening the valves is so constructed, that the front valve is not opened until the piston has passed; and the time they remain open for the admission of air behind the piston can be regulated at will. The principal advantage claimed by the inventor for his plan, is the entire absence of leakage; and if the valves can be kept hermetically true, we grant such to be the case; but without any wish to damp the ardour of invention, while we give every credit for the great ingenuity of the plan, we cannot but state, that it appears to us apparent that the complexity of its construction, the greatly increased first cost, the liability to derangement in working, the friction arising from its numerous working points, and the impossibility of working curves of even moderate radius, must prevent its superceding the plan now in use, or competing with others now before the public.

ON THE CONSTRUCTION OF SUBMARINE RAILWAYS.

At the last monthly meeting of the Liverpool Polytechnic Society, Mr. JOHN DE LA HAYE read a paper "On the Construction of Submarine Railways," of which we subjoin a brief abstract—having, as our readers are aware, already fully detailed Mr. De la Haye's views in the *Mining Journal.* After briefly noticing the origin of the invention, he proceeded to explain the principle of his plan—the object of which is to construct wrought-iron tunnels, in separate divisions of 400 ft. in length, each division being blocked up at both ends with temporary frames of wood and iron; then sunk on the bed of the water, and afterwards connected, so to render the whole as one building. The details of the method of opening a road through the water being different according to the locality, a description of the various operations may not be uninteresting. To construct a road through a deep channel, he proposes to lay a flooring of wood, the whole length of the road, on the bed of the water; this flooring to be 28 ft. wide, and 8 in. thick, and furnished with small longitudinal grooves. The divisions of the tube would be furnished with a flange on each side, and small wheels under it, and would be let down gradually, in such a manner as to permit the small wheels entering the grooves of the wooden flooring, so that the divisions might be shifted along the floor a few feet, for the purpose of connecting them; several wooden pillars are to be fastened to the wooden flooring, in order to guide each division in its descent, so that it might rest exactly on the centre of the floor. To obviate the inconvenience of filling them with water, he proposes to load the outer flanges with stones, but not in sufficient number to cause the tube to sink; then to launch each division at sea, and, after being towed to the required spot, to throw several pieces of cannon, or very large stones, fastened with chains across the arch of the division, in order to cause it to sink. The only work required to connect the divisions temporarily would be to pass an iron shaft, shaped at the end, in the form of a screw, through the blockading frame of the division near the shore; by turning the shaft, the screw end would enter 8 in. in the blockading frame of the next division, and thus permit the shaft being drawn by horses, when the division would glide on the grooves, and the two ends brought one against the other. The ends of the divisions would be covered with wood, lined with vulcanised India-rubber; so that, when strongly pressed together, very little water could enter between, while the division would be permanently connected. That part of the tunnel near the shore, he proposes should be sunk below the bed of the water, in order to protect it from the violence of the waves; while in rivers, he proposes to sink the whole of it in the soil, so that no impediment to the navigation of the river would be offered. To effect this, it is simply required to blast the bed of the river with gunpowder, until the soil would be completely shattered, when a part of the earth might be removed by means of machinery already in use: this might be done principally near the shore. The tunnel for a river would be simply an iron arch—that is, having neither floor nor flange, each division would be placed on the bed of the water, the water and air pumped out, in order to form a partial vacuum, when the air and water would exert a tremendous pressure on the iron arch, and cause it to enter the earth very rapidly, the edges of the tube being very thin, would cut through the shattered soil. When partly sunk, the earth should be excavated by boring a tunnel under the town as far as the edge of the water. After being excavated, the iron tunnel would sink to the required depth by the pressure of the water and its own weight, The iron floor would then be fastened to the tunnel, and the rails laid down, when it would be completed. The cost of building iron tunnels, which are to be 16 ft. wide, was the next subject examined; he remarked that, as the iron would be sufficiently strong if 1 in. thick, only 5000 tons of iron would be required for one mile, or at 10*l.* per ton, 50,000*l.* per mile for the iron; and that, probably, the cost of constructing a tunnel of that description in the Mersey, including the tunnels on land, stations, &c., would be less than 250,000*l.* He said that not only would the cost of constructing iron tunnels be considerably less than that of boring under the bed of the river, but that, by his plan, there would be an almost total absence of danger in opening the road—while, if an attempt to bore under the Mersey was made, it was probable that the soil above would give way by the shock which it would receive in blasting. No objection having been brought against the plan, after the paper had been read, the president proposed a vote of thanks to Mr. De la Hayle, for his explanation of a mode by which we may conquer the sea as well as the land. This proposition having been carried, the meeting then broke up.

DIRECT BOMBAY AND MADRAS RAILWAY.—We noticed, in last week's Journal, the formation of a company, for the purpose of constructing a railway from Madras to Bombay, and which will connect the principal cities and towns between the former port and the western side of the Peninsula of India, containing a population of upwards of 30,000,000. It is proposed that the line shall commence at Arcot, where it will be met by the Madras and Arcot, Madras and Nellore, and the Madras, Sadras, and Pondicherry Railways, and, in its route to the terminus at Bombay and Salsette, will traverse, throughout its entire length of 716 miles, districts most prolific in the production of cotton, coffee, tobacco, opium, sugar, silk, gums, senna, cassia, dyewoods, furs, hides, betel nut, lac, nitre, numerous spices, timber, with every kind of Indian grain, and indigo; coal, charcoal, and firewood, will also form large items in the traffic. To form a clear estimate of the important advantages which must accrue to India from the construction of such a means of communication, it is necessary to notice how the present extensive traffic is conducted: much of the produce of the interior, particularly cotton, has to be carried to the place of shipment on the backs of oxen, at a rate not exceeding 10 miles a day, adding enormously to its price; and the establishment of the railway would reduce the cost of traffic in that commodity, as well as silk and other produce, to one-fifth of the present charges. With respect to the voyage by sea from Madras to Bombay, and by which all heavy goods are sent, and the greater number of passengers travel, to those who may not be acquainted with it, it will appear singularly circuitous; Madras is in north latitude about 13°, and Bombay 18°; to sail from the former to the latter a route must be taken south by east, to near 10° of south latitude; the course is then continued to the westward, outside the Chagos Islands, over an extent of 20° of longitude, and then by a north and north-eastern sweep to Bombay, making, in the whole, a distance ef 5420 miles. During the latter part of June, all July, and beginning of August, the passage may be made by keeping to the north, or inside the Chagos Archipelago, which will cause a trifling saving, but the remaining portion of the year, particularly during the continuance of the south-western monsoon, the outer passage is the safest and usually adopted; the average time occupied in this voyage is from 15 to 40 days—while, by the proposed railway, the distance of 716 miles only, may be performed in from 25 to 30 hours. Intersecting the most wealthy and industrious provinces of the Carnatic, Mysore, and Beejapoor, which abound in natural productions, manufacturing industry, and agricultural wealth, and where, by the great facilities offered for its construction, from the abundance of material and cheapness of labour, it is all but manifest that it must pay a large return upon the capital, and become a connecting link of the utmost importance to the whole continent of India.

INCREASING APPLICATION OF GLASS IN THE ARTS.—At the last meeting of the council of the Agricultural Society, Messrs. Edwards and Pell, of Southampton-street, presented two glass milk-pans, of their manufacture—the one of dark, and the other of light green. We understand that, from numerous experiments which have been made with these pans for dairy purposes, it has been clearly proved that they produce more cream, and consequently more butter, from a given portion of milk than metal, earthenware, or any other description of dairy pans; and, from their extreme cleanliness, the cream may always be obtained in its utmost purity. These glass pans are so easily cleaned, that *scalding* water is not required, and can only be used at the risk of breaking, as they are made of considerable thickness, to enable them to withstand a blow uninjured; and this renders them more likely to fly, from sudden contraction, or expansion, by heat; cold water, poured in first, and then hot water added, to make it warm, is the way recommended for cleansing, and which may be depended on as safe; the dark pan weighs 8 lbs. and the light 10 lbs. each, and holds about 1½ gal. Messrs. Edwards and Pell are about to introduce glass pipes, for the conveyance of water and gas—a subject which we have before alluded to, and of which, on their application, we shall give an early notice. The numerous specimens of ornamental ground and stained glass are well worthy inspection.

The British Association for the Advancement of Science, has fixed the period of the next meeting to be held at Southampton, for the week commencing 10th September. The president, appointed at the last meeting at Cambridge, is Sir Roderick Impey Murchison.

Mining Correspondence.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINES.—Gold workings from 23d to 28th Feb., 7 lbs. 1 oz. 16 dwts.—total, from 1st. Jan., 55 lbs. 7 oz. 12 dwts. 13 grs.

NATIONAL BRAZILIAN MINES.—*Cocaes, March* 2.—The want of a tram road in the shallow adit is now severely felt; this tram road might have been begun before, but it would not do to make too expensive preparations until the mine was fairly proved, which I consider is now done. I [the mining captain] have been here now more than two months; during that period I have never seen the prospects of our mine looking so well as at present. We have succeeded in cutting a plat, for sinking a winze, which shall be prosecuted with all energy, as, on its completion, we shall be able to work with much greater advantage. In our next, we will give you more information on this point, as well as the formation on the Bandeira level, which, from a sample we have had washed, will, doubtless, yield well.—Produce from the Serra Velha for 10 days, 2 mcs. 4 ozs. 3 ottz. 19 grs.

ENGLISH MINES.

BOTALLACK.—At an account-meeting, held on the mine, on the 19th inst., the following statement of mine cost for Jan. and Feb. was submitted:—

To labour cost			£1179	0	3
Merchants' bills, &c.			774	1	9—1953 2 0
By balance in purser's hands last account			£ 459	0	9
Copper sold in March, 169 tons 10 cwts. 2 qrs.	£1080	6 11			
Less dues	60	0 4—1020	6	7	
Tin sold, 17 tons 8 cwts. 1 qr. 9 lbs.	901	16 10			
Less dues	45	1 10— 856	15	0	
Sundries			89	10	11—2425 13 3
Profit			£ 472	11	3

The next account will be held on the mine on Tuesday, the 21st July, when a surgeon will be elected, in the room of Mr. Thomas, who has resigned.

BARRISTOWN.—May 15.—The 18 fm. level end, west of flat-rod shaft, produces 2½ tons per fm.; the eastern end, at this level, is at present over the lode; our object in driving in this direction is to communicate this level with Dane's shaft, which we shall accomplish in 2 fms. The lode in the winze, sinking under the 12 fm. level, west of flat-rod shaft, is improved, producing 3 tons per fm.; the end west, out of this winze, produces about 2 tons per fm. We have intersected the lode in Nangles' shaft, it is about 3 ft. wide, with a solid branch of lead, about 6 to 8 in. through it, producing between 1½ and 2 tons per fm.; the water is so quick, that we have been obliged to abandon it, till a lift is fixed with flat-rods from the engine. The tribute pitches look much the same. We shipped 40 tons of silver-lead ore for the ticketing at Holywell, on the 8th and 12th.—Thomas Angove.

BEDFORD UNITED.—May 19.—At Wh. Marquis, the lode at the 80 fm. level east is about 2 ft. wide, producing good stones of ore in places. In the 70 fm. level east the lode is 2 ft. wide, composed of gossan and ore; the rise in this level is holed to the winze in the 58 fm. level; the stopes in the bottom of this level are still worth 18*l.* per fm. There has been no lode taken down in the 58 fm. level since last report. At Ding Dong, the lode in the 24 fm. level, west of Thomas's engine-shaft, is 2½ ft. wide, producing good stones of tin. At Wheal Tavistock, the lode in the 47 fm. levels, east and west, is about 2 ft. wide, very kindly. The lode in the 35 fm. level east is somewhat improved, being 18 in. wide, producing a little saving work; in this level west the lode is 2 ft. wide, composed of spar and mundic, and good stones of ore. The lode in the south engine-shaft is 5 ft. wide—gossan, spar, and ore.—J. Phillips.

CALLINGTON.—May 18.—Johnson's engine-shaft is now in course of sinking below the 112 fm. level; at this level, both north and south, we are opening tribute ground. In the 100 fm. level, driving south, the lode has not been taken down; the north end is opening ground that will set at a moderate tribute. In the 90 fm. level north the lode continues promising; the back will set at 7*s.* in 1*l.* In the 80 fm. level the lode is producing silver lead ores. At the north mine our engine-shaft is down for a 100 fm. level; we intend sinking a few feet deeper, for a tip plat and fork, before we commence driving. In the 90 and 80 fm. levels we are opening tribute ground. In the 70 fm. level, driving south, the lode is intersected, and hove by a slide; the north end is going through ground that will set at a moderate tribute. The Counthouse shaft is holed to the 60 fm. level.—J. T. Phillips.

EAST TAMAR CONSOLS.—May 18.—At Whitsun, the 46 fm. level, north and south, are looking kindly. The 36 fm. level north is improving, producing good stones of lead. At Furzehill, we are getting on with the engine as expeditiously as possible; our shaftmen are engaged in cutting a plat, and preparing for fixing the lift, which work will be completed in the course of a fortnight. Our pitches are looking as well as can be expected. We have shipped to-day 42 tons 7 cwts. of silver-lead ores.—B. Robins.

GREAT WHEAL WILLIAMS.—We drove 12 fms. in the adit level in April, the ground still favourable for driving; lode about 2 ft. wide, composed of soft sugary spar, prian, mundic, killas, occasionally spotted with lead.—B. Cooke.

GUNNIS LAKE.—May 19.—At Chilsworthy, Bailey's engine-shaft is 7 fms 3 ft. under the adit level; there has been no lode taken down. In the 10 fm. levels, east and west of western shaft, the lode is without alteration. We have discontinued shoding on the south lode. At Wheal Hingstone, in the pits on the middle lode, Dimson, the lode is rather small, but kindly.—W. Richards.

HARROWBARROW OLD MINE.—We have sunk the engine-shaft about 3 fms. under the 53 fm. level, and are now sinking about 4 ft. per week; the St. Vincent lode, which was in the shaft, is underlaid out of it, towards the great copper lode. In the 53 fm. level west the lode is about 1 ft. wide, composed of mundic, quartz, and peach, spotted with ore; in the 53 east the lode is about 2 ft. wide, rather hard, composed of quartz, mundic, and ore. Good-luck shaft is cleared up 16 fms.; the whim is ready to work; the favourableness of the weather has enabled us to set two pitches on the silver lode.—B. Cooke.

HAWKWOOR.—May 19.—The lode in the winze in the adit level is 20 in. wide, much as last reported. Since my last the 15 fm. level, east of Hitchins's engine-shaft, has been driven 9 ft. in a very good lode, worth, on an average, about 14*l.* per fm. The lode in the present end is 3½ ft. wide, and worth 9*l.* per fm.—very kindly; the backs of the level will set at a tribute of 6*s.* 8*d.* in the 1*l.*—P. Richards.

HOLMBUSH.—May 19.—I beg to inform you, the ground in the bottom of Hitchins's shaft is more favourable for sinking, having met with a floor of white killas, which, we hope, is not of a temporary character. The 110 fm. level, west of Hitchins's shaft, is still in the cross-course. In the 100 fm. level, west of ditto (on the north part), the lode is 18 in. wide, and worth 20*l.* per fm.; the lode in the stopes, in the back of this level, is 2 ft. wide, and worth 25*l.* per fm. In the 100 fm. level west (on the south part), the lode is 15 in. wide, composed of spar, mundic, and spots of ore; at this level, driving south, the lead lode is 5 ft. wide, composed of spar, flookan, and spots of lead; in the same level, driving north, the lead lode is 4 ft. wide, composed of spar and flookan. In the 100 fm. level, west of Wall's shaft, the flap-jack lode is 18 in. wide, composed of spar, mundic, and spots of ore. In the 90 fm. level, west of Hitchins's shaft (on the north part), the lode is small and poor; in the same level, driving west (on the south part), the lode is 1 ft. wide, composed of spar, mundic, and stones of ore; in the 90 fm. level south the lead lode is 4 ft. wide, composed of flookan and spar. In the 80 fm. level south the lead lode is 3 ft. wide, composed of flookan and spar; the rise in the back of the 80 fm. level, against Bray's shaft, is hard and poor. In the 62 fm. level south the lead lode is 20 in. wide, composed principally of flookan.—W. Lean.

LAMERHOOE WHEAL MARIA.—May 14.—The engine-house is up and covered in, and the whole of the engine, excepting a few small articles, is arrived on the mine, and there is a strong force employed in erecting it. One of the boilers is nearly completed, and the other will be finished in about five weeks; we might, for some time, work with one boiler. The engine (Hay's) shaft is sunk, and timbered down about 9 fms. in good killas ground. The flat-rod (Davey's) shaft we are obliged to discontinue sinking, in consequence of the water being too quick; this shaft can be sunk much cheaper when the engine is up. On B lode there are six men put to work, and we are driving by the side of the lode, through which we shall occasionally cut, to ascertain its appearance—the lode itself being too hard to drive on with any speed; but, from its present appearance, this lode is likely to make some tin on the back, some good stones of tin being occasionally found. A lode is at present rather disordered by a small cross-course gone across the end, and we now intend driving south. The operations as to the necessary erections are progressing with all possible speed, and there is no doubt the engine will be set to work by the 30th June, according to contract.—John Williams.

LEWIS.—May 16.—Wheal Nutt engine-shaft is 8 fms. 5 ft. under the 50 fm. level, ground easy; the lode is 18 in. wide, yielding some tin, and very kindly. The lode in the 50 fm. level end east is 2 feet wide, worth 4*l.* 10*s.* per fm. for tin, and very promising; the lode in the 50 west is 2 ft. wide, producing some tin. The lode in the 40 fm. level west is 2½ ft. wide, yielding some tin; since our last report, at the 40 fm. level we have intersected a flookan, and have not yet seen it east of the same; but we expect, from its appearance at the level above, to open ground that will work at about 7*s.* tribute for tin. The lode in the 30 fm. level east is 3½ ft. wide, producing some tin. The lode in the 20 fm. level west is 2 ft. wide, worth 50*s.* per fm. for tin. In the cross-cutt, driving north at this level, we have cut a very promising branch, that will work at a tribute of about 7*s.* for copper. The lode in the 10 fm. level west is 2½ ft. wide, worth 50*s.* per fm. for tin, and very promising. We hope now to get on much better, as we have set our new plunger lift to work at the adit level, in order to have the water over the stamps' wheel, and we are now enabled to stamp much faster. We have also commenced burning tin in our new burning-house, which is burning extremely well.—S. Noall. P. Eddy.

MENDIP HILLS.—May 16.—I beg to say that our 18 fm. level, north of Stainsby's shaft, is not driving; we have put the men that were in the north and south ends to sink Stainsby's shaft deeper; the shaftmen last week have been engaged in putting in penthouse, &c., and have sunk 1 fm. below the 18 fm. level; the price for sinking is 3*l.* per fm.; the lode is 9 ft. wide, with spar, iron, and stones of lead; next week we shall drive the 18 south new shaft, the men are engaged cutting whim plat, &c., which will be completed this month; then we shall drive west to cut Stainsby's lode, which is 7 or 8 fms. At Paynter's, in the 18 fm. level north, there is no lode, being all taken away by the old men; we intend to sink Paynter's shaft deeper next week. At Somers's, in the 20 fm. level, we are sinking a winze, the lode is 5 ft. wide, with spar, iron, and lead, the price for sinking is 3*l.* per fm.; in the 20 end, at ditto, we are in broken ground; all the lode taken away by the old men, who must have had a good shoot of ore; the gunnis is 9 ft. wide, all taken away last week; We hauled 17 whim kibbles of rich work out of the 30 fm. level, north of Somers's shaft, which is at surface, and will make 1½ tons lead ore.—G. Paynter.

NORTH WHEAL PROVIDENCE.—*Warleggan, May* 6.—Since the last meeting, a 30-ft. water-wheel, 6-ft. in the breast, with flat-rods, bobs, and pit-work, has been erected and set to work, completely draining the shaft, which is now sunk 4 fms. below the adit level. The pitmen have contracted to sink the same 6 fms. 1 ft. deeper, fixing ladders, dividings, casings, &c., for the sum of 47*l.* The lode in the adit is situated about 14 fms. south of the engine-shaft underlying north from 2 to 3 ft. per fm. At the point of intersection in the cross-cut from the adit to the shaft, the lode is about 8 ft. in width, and consists principally of capel, quartz, and prian, spotted with mundic and ore. The adit has been extended east, on the course of the lode, 40 fms. beyond the cross-cut; in driving the last fathom or two the lode contains a branch of tin, 15 in. wide, worth 1*l.* 5*s.* per ton of stuff. From the encouraging appearances this lode has assumed, and the great excavations made by old miners on the backs of other lodes in this sett, I presume a large quantity of tin has been, and may still be raised in the prosecution of working on the several lodes, and which may be accomplished at a comparatively small outlay, as the ground is easy, and the water power sufficient to explore the mine to any extent. I would, therefore, recommend your proceeding with steady perseverance in sinking the engine-shaft, and driving the adit level on the course of the lode; the side lodes may be explored at some future period, as it would not be advisable to incur any additional expense until the mine is laid open at a deeper level. I think it would be advantageous to have a new shaft sunk on the present adit end, as the air is rather dead, and the distance to wheel the stuff to the engine-shaft upwards of 50 fms. It could be sunk cheap, and in a short time, as the ground is very soft.—Henry Taylor.

PENNANT LEAD AND COPPER MINES.—May 16.—The deep adit level cross-cut, north and west, is driven 44 fms.; the ground at present is rather hard for driving. I expect, in about 5 fms. driving, we shall have a change for the better, as we shall be within 5 fms. of cutting the first lode—making, altogether, about 10 fms. from the present end to the first lode. To the second lode is about 25 fms.; that lode is 4 ft. wide, of soft spar, prian, gossan, flookan, &c., and also soft killas about the lode, of very promising nature. I have traced these lodes across the mountain on the eastern side; there I find the lodes equally as large and kindly, much of the same character, with several small lodes or branches intersecting those lodes, and no doubt will very much improve them in producing large quantities of silver-lead ores of very rich quality. I assure you, the more I go through this Pennant sett, the better satisfied I am of its beneficial result. I shall not hesitate a single moment in stating to you, that this sett is large enough for at least six setts; there are three of them I would strongly recommend you to commence working immediately. There is a good road made to come up to the mine, with all kinds of material that may be wanted from time to time. I beg, do not lose sight of the remarks I have made respecting the eastern side of the mountain; some of these lodes are Cowarch Mine lodes. I would advise you not to have this part of the sett stand over another week before you put men to work, to drive a deep adit level, on the course of one of these large lodes. You will also be pleased to bear in mind, it is only about 2½ miles apart, on the course of these lodes, from where they are working, and the part I have been stating to you the character of. Both ends of the sett are looking well, and no doubt but what the middle will be much better.—Thomas Kitto, Jun.

SILVER VALLEY.—May 18.—I beg to say, that in the engine-shaft, which is sunk 7 fms. 1 ft. below the 30 fm. level, we have intersected a south branch, about 1 ft. 6 in. wide, underlaying north, composed of capel and peach, with some very good spots of tin in places; the rise in the back of this level, on the tin lode, is just holed to the winze; at this point the lode is about 1 ft. 6 in. wide, composed of capel, peach, mundic, and spar. The men will now resume driving the western end; the lode in the eastern end is 1 ft. wide, composed of capel, peach, and spar: the lode in the stopes in the back of this level is without much alteration, being about 2 ft. wide, one-half of which is saving work. The lode in the 20 fm. level west is 1 ft. 6 in. wide, composed of capel, peach, and mundic, containing a little tin. At the south shaft the 40 fm. level east is cleared to the end, which is 20 fms. 3 ft. from the shaft; the lode is 1 ft. 3 in. wide, composed of flookan, peach, and spar. In the cross-cut at the 30 fm. level, towards the copper lode, we have intersected a branch, about 4 in. wide, composed of capel, mundic, and spar; we expect from this that we are near the lode. We expect to hole the winze sinking below the 20 fm. level to the stopes this week,—and as soon as this is done, we shall again stope the silver branch. At Wheal Sisters, in the adit level, we are making a plat, for the advantage of getting away the stuff through the shaft, by cutting down the lode in the side of the level, which is 1 ft. wide, composed of flookan, peach, spar, and mundic, containing a little silver.—S. Richards.

TAVY CONSOLS.—The winze is much improved, having a course of ore in it through the last 5 ft. sinking, and is now about 2 ft. wide in the bottom; the lode is much harder than the winze; in the adit end the lode is about 4 ft. wide, composed of spar, mundic, peach, and ore—a promising looking lode.—B. Cooke.

TRELAWNEY CONSOLS.—We have sunk about 3 fms. on the south and great gossan lode (in the new ground), the lode in the bottom is about 4 ft. wide, composed of gossan, prian, horn spar, quartz, and mundic—a kindly looking lode.—B. Cooke.

TRELEIGH CONSOLS.—May 16.—In the 100, north of Christoe, we have cut a part of the cross-course, and hope in a few days to see the lode. In the 90, east of ditto, the lode is 3 ft. wide, worth 16*l.* per fm.; in the 90, west of ditto, the lode is small—no mineral. The 80 cross-cut south, we are driving to cut a south branch. In Garden's shaft, below the 80, no lode broken since last report; in the 80, west of Good Fortune, the lode is about 3 ft. wide, but little mineral. In the 70, west of ditto, the lode is about 4 ft. wide, producing good stones of ore, very kindly. In the 60, west of Symons's, the lode is 2 ft. wide, producing stones of ore. The 50 cross-cut north we are driving to cut a north lode; in the 50, west of ditto, the lode is 3 ft. wide, worth 14*l.* per fm., with a very kindly appearance. In the 20, west of ditto, the lode is small, without mineral; in the adit, west of ditto, the lode is 3 ft. wide, very kindly, producing good stones of ore.—W. Symons.

UNITED HILLS.—May 19.—In the 90 fm. level, eastern end, the lode is 2 ft. wide, good ore; in the western end the lode is 2 ft. wide, good ore. In the rise, in the 80 fm. level, the lode is 4 ft. wide, orey throughout, of average quality; in driving this level west the lode is 3 ft. wide, unproductive. In driving south at the 70 fm. level the ground continues hard and wet. West of James's shaft the lode is 2 ft. wide, poor. We are getting on favourably in sinking the diagonal shaft. In the 60 fm. level, east of eastern shaft, the lode is 2 ft. wide, 18 in. ore of fair quality. West of Harper's winze the lode is 2½ ft. wide, saving work. The lodes in the stopes, east of Harper's winze, is 2½ ft. wide, ore of fair quality. In the 50 fm. level no alteration for the past week. At Wheal Charles, in the 50 fm. level, the lode is 18 in. wide, 1 ft. ore of average quality. In the 40 fm. level the lode is 2 ft. wide, producing ore throughout, of a coarse quality. At Wheal Sparrow, in the 40 fm. level the lode is 2½ ft. wide, producing some good stones of ore. In the 30 fm. level the lode is 2 ft. wide, 1 ft. ore of fair quality.—T. Trevenen. R. Williams.

WEST WHEAL JEWEL.—May 18.—We have intersected Wheal Jewel lode, in the 115 cross-cut, in the past week, 15 in. wide, composed of spar and spots of ore. In the 100 fm. level, west on ditto, the lode is 1 ft. wide, containing stones of copper; the ground in the rise, in the back of this level, east of cross-cut, is hard. No lode taken down in the 85, 70, or the 12 fm. levels, west on ditto, in the past week; in the winze, sinking below the 85, east on ditto, the ground is favourable, and the lode is worth 4*l.* per fm.; the ground in the 85 cross-cut south, is still favourable for driving. In the 12 fm. level, east on Tolcarne tin lode, no lode taken taken down here, neither in the 12 fm. level west, since our last; neither will be till the end of the present month. In Wilkinson's engine-shaft, sinking below the 30 fm. level, the lode is 2½ ft. wide, composed of spar, mundic, and stones of ore.—S. Lean. R. Johns.

WHEAL BREWER.—May 5.—The accounts represent the balance in hand from last account as 204*l.* 17*s.* 9*d.*; by copper ores, sold the 12th Feb. (deducting lords' dues), 301*l.* 13*s.* 1*d.*; and received from Wh. Trethellan adventurers for use of levels, &c., 12*l.*; together, 518*l.* 10*s.* 10*d.*—The labour cost for Jan., Feb., and March, 284*l.* 13*s.* 4*d.*; merchants' bills, &c., 83*l.* 16*s.* 10*d.*—368*l.* 10*s.* 2*d.*; leaving now in purser's hands, 150*l.* 8*d.*

WHEAL CONCORD.—May 18.—The pitch at the back of the 12 fm. level is looking well, and the lode is from 2 to 2½ ft. wide, with good work. We are clearing the winze from the 12 fm. to the 20 fm. level, and have discovered some good tribute ground, which will be in course of working at our next survey-day, for a low tribute. We have holed the east shaft to the 10 fm. level, and are making preparations to drive east, where we are expecting to meet with some rich ground, as there was such a large bunch to the west of this at the last working of the mine. We are now driving through the cross-course, and expect to have 4 or 5 ft. to drive to have the lode in its regular course. The water is forked 3 fms. below the 28 fm. level, but not quite secure as far as we have been. The 28 fm. level is looking quite as well as I expected, and I hope in a short time to set tribute ground at the back of that level.—B. Robins.

WHEAL WILLIAMS.—The committee have communicated to the adventurers the following abstract of a report, received from Capt. Hambly, dated May 13:—"I send you some specimens from a lode now seen in the bed of the river. The several branches appear to be connected as one lode, about 8 ft. or 9 ft. wide, west of the Capel Tor. The stones of ore sent are the best I ever saw so near the surface, and I have no doubt that we shall have in depth a large and first-rate lode."

WHEAL MEXICO.—May 20.—Since our last report, we have driven 3 fms. more on the cross-course, at the 20 fm. level, in addition to the 4½ fms. which we had driven; up to this time we have not met with the lode; we have driven through some branches in the last fathom, which seems to indicate the lode is further north on the copper lode. At East Cornwall, we have sunk 5 fms. below the adit, and commenced driving a cross-cut; and, in about a fortnight, from this time, we expect to cut the lode at the 5 fm. level.—W. Knott.

CLEVELAND MINING COMPANY.

A meeting of the adventurers in this company was held at the account-house, on the mine, on Wednesday, the 13th inst., when the following accounts were examined, and allowed:—

To August, September, and October wages			£178	2	4
Arrears on first and second calls			27	17	9
Nov., Dec., Jan., Feb., and March wages			263	6	6
Merchants' bills, for eight months			51	14	9— 521 1 4
By tin sold			£ 37	11	6
Less 1-22d dues			1	14	2
			£35	17	4
Third call, August 25, 1835			249	0	0
Fourth call, 26th November, 1846			249	0	0
			£533	17	4
Less balance end of July, 1845			123	13	8— 410 3 8
Undivided loss			£		110 16 8

It was then resolved,—That a call of 30*s.* per 166th share be made, and immediately collected, to pay off the above balance, and for prosecuting the mine; and the purser be directed to take as much of the Trevidia sett as he can get for the adventurers of this mine.—Signed by the adventurers present, Messrs. Wm. Tyache, W. G. Cougoon, G. Sealy, J. Lyle, T. Richards, J. M. Kernick, W. Crotch, R. Rasvearne, W. Hensley, S. Kernick, N. Harvey, and H. Rogers.

The following report, from Messrs. J. Kernick, H. Rogers, and W. Hensley, was read to the meeting:—"The several lodes cut in the deep adit are of a very promising character, with tin in all of them; but, owing to the great distance the deep adit has been driven (148 fms. from the only shaft sunk to it), and for want of ventilation, and less expensive means of removing the waste, we are prevented working the lode to advantage; to remedy this, we are sinking a new shaft on the south lode—now about 15 fms. deep—and which we expect to complete to the adit in about three months; soon after which, we shall see the lodes clear of the cross-course and in settled ground, when we hope to raise tin stuff to remunerate the adventurers for their perseverance."

Dolcoath Mining Company.—At the two-monthly meeting, the accounts for the two months, ending April, were presented, showing a deficit of 658*l.* 6*s.* 7*d.*, which, added to the balance previously standing against the mine, 774*l.* 16*s.* 1*d.*, gives a total of 1433*l.* 2*s.* 8*d.* The following is from the statement of accounts submitted:—Cost for March and April, 3590*l.* 7*s.* 10*d.*—By ores sold, 1542*l.* 19*s.* 11*d.*; tin, 1863*l.* 17*s.* 2*d.*; debts from tributers, 25*l.* 4*s.* 2*d.*—together, 2932*l.* 1*s.* 3*d.*: showing a loss for two months of 658*l.* 6*s.* 7*d.*, which, with balance due February account of 774*l.* 16*s.* 1*d.*, makes a total of 1443*l.* 2*s.* 8*d.* To provide for this deficit, as also to erect additional power for stamping, it being contemplated to put 45 heads extra, which would be attended with a cost of 800*l.*—making together, 2243*l.* 2*s.* 8*d.*, not to advert to the loss which might arise in the next two months' working; it was proposed to make an immediate call of 6*l.* per 186th share, and a further call of 5*l.* per share in two months—making together, 2046*l.*: such calls being payable to Messrs. Tweedy and Co., the bankers of the mine. It would appear, that the tin stuff at surface is estimated at 2500*l.*, minus the cost of returning, and which, with the additional machinery, will be rendered available, and thus in part meet the current outgoings, or monthly cost. The value of the machinery may be taken at 8000*l.* to 10,000*l.* Lady Bassett has, with that kindly and spirited feeling which she has ever displayed, as connected with mining—following in the path so nobly laid down by Lord de Dunstanville—generously given up all claim for dues, until 2000*l.* profit shall have been first returned to the adventurers. This is, in itself, a strong point, and well calculated to encourage the adventurers, and she has, moreover, assented to grant a new lease.

Theloggan Mining Company.—At a meeting of adventurers, held at Farquharson's Hotel, on Saturday, the 18th April, it was resolved, that the accounts presented—showing a balance against the adventurers of 90*l.* 4*s.* 2*d.*—having been examined and allowed, be forthwith divided and collected; and that legal proceedings be taken against all defaulters, and that the affairs of the mine be wound up as speedily as practicable. Signed by H. Stokes, Baynard and Sons, T. Treloar, J. Champion, J. Strongman, W. C. Higgs, M. Knight, J. Paddon, I. Latimer, W. H. Paddon, J. Murrish.—Agreeable to the above resolution, notice has been sent to each shareholder for their proportionate part (being 7*s.* 1*d.* per 256th share).

[FROM CORRESPONDENTS.]

The adventurers connected with Lydford Consols, Wheal Mary, and Wheal Castle, on the borders of Dartmoor, have consented to the consolidation of these promising adventures. In consequence of the great improvement in the lodes, active preparations are making for dressing floors, &c. In sinking a new shaft, at a depth of about 4 fms., they are now raising some very good copper and lead, and driving on the course of several very encouraging lodes in the respective setts. They have also opened a large lode, 10 ft. wide, looking very well for copper.

Exmoor Wheal Eliza is situated near Simon's Bath, Somerset, where since the commencement of working this mine, in November, 1845, a discovery of a large champion lode has been made, running east and west, and measuring from 20 to 25 ft. from north to south. This lode has been opened from 150 to 200 fms. on its back, by way of shoding or costeaning; at the commencement, an adit was driven through the lode, taking up at high water at the Barral River, where there is a never-failing stream, capable of working any machinery that may be required for further prosecution of the mine—such a facility is rarely to be met with. It was then thought proper to go about 50 fms. further east, and a shaft was there commenced 10 ft. long and 8 ft. wide, with neither north or south wall—the lode being very large; in both of these places, some fine stones of yellow and black ore have been taken out. The lode is composed of gossan, mundic, spar, and peach, greatly impregnated with black and yellow ore. Very fine specimens of malachite have been taken out of the lode nearly at the surface. After making these discoveries, it was then thought proper to open the lode further west, where, if possible, better specimens of copper were taken out than has ever been seen. Two men were then put to drive a cross-cut at the eastern shaft, to take off the surface water, and to act for the purpose of an adit, provided machinery should be placed there. In driving this cross-cut, several branches produced good stones of copper—from 2 to 3 in. wide have been driven through, underlaying from 4 to 5 in. in the fathom, dipping towards the lode, which must be again cut in sinking a few fathoms. The prospects of this mine are certainly very flattering; all who have seen it give a favourable report. The stratum is a beautiful light killas, with floors of elvan. Not far from the place where the men are now working, there is a large cross-course, with large stones, containing quartz and spar of an immense size; this sett is a very extensive one, about three miles east and west on the course of the lode, and about two miles north and south, and only eight miles from an excellent seaport town. There are other large lodes in the sett, which, from the short time from the commencement of its working, have not yet been opened. According to appearances, and from the opinions expressed by numerous mining agents and captains, who have inspected it, it will most probably prove to be one of the best and most profitable mines in the west of England.

East Alvinney Tin Mine.—"This mine is situate about six miles south-east of Camelford, between three and four miles east of the noted granite hills of Router and Brown Willie, about one mile from Five Lanes, in the parish of Altarnum, and adjoining a mine called South Alvinney, the lodes of which run through the sett. The sett contains five lodes, three of which were formerly worked upon the backs by the old streamers, who stoped away all the lode, until prevented by the accumulation of water. Three of these lodes run east and west, and have a south underlay; the other two lodes are caunter lodes, they intersect in this sett, and at the point of intersection immense quantities of tin appear to have been raised, and the burrows are deep and extensive. This sett (which also includes another and adjoining property called Carkees) was taken up a few months since. The water in the burrows has been partially forked; the tops of the stopes of the old men's workings have been inspected, and large stones of tin, of most excellent quality, have been broken; an adit is now driven about 50 fms., in order to intersect and unwater the north lode. It is calculated this lode will be reached by the adit in about 8 fms. An engine-shaft has also been commenced, in order to cut the south lodes to the depth of 20 fms.; the lodes are about 15 fms. distant from each other, in a junction of beautiful decomposed granite and killas. By driving a cross-cut, we shall have three lodes in the shaft, and the north lode in the adit, when we expect to bring large quantities of tin into the market. In the north extremity of the sett (called Carkees) there are two other lodes, from one of which there have been batches of tin returned by the old men, with no other machinery than a pair of stamps; the other lode will bring tin *on the sheers*, and will, no doubt, make large quantities of tin in depth. The extent of this sett is about one mile and a half from east to west, and about one mile north and south. All the lodes in South Alvinney (where they are setting on tribute at 5*s.* in the 1*l.*) run through this sett. The quality of the tin cannot be surpassed. There is a sufficient supply of water to prosecute the mine to the depth of 200 fms., and there cannot be

the slightest doubt but this mine will, in a short time, amply reward the adventurers.—JOHN SPARGO, superintending agent; SAMUEL GREGORY, captain."—Since this report, the agent writes:—"We have two men clearing a pit on the old workings a few fathoms west of the engine-shaft. We have got down to the old men's stull, and have found a plat, which was a landing-place for tinstuff; we there found some excellent stones of tin, but we cannot get to the bottom for the water. We tried to get down on the other lodes, but the water was too quick; I see, therefore, nothing more need be done by shoding; we have discovered the run of the lodes, and the only thing now necessary is to drive on our adit, and sink our engine-shaft. Since my last, we have cut the large lode in Carkees further up the hill, which I am happy to say is a promising lode. The country is impregnated with wolfram and black jack, which is a good indication, and we can break good stones of tin in the large lode on the hill."

GREAT WHEAL FREDERICK.—"This mine is situated about four miles north of Liskeard, and lies at the foot of the north declivity of Caradon Hill, in the parish of Linkinghorne. The sett exhibits extensive surface workings for tin upon three different lodes; and Thomas Hooper, who is now captain of the mine, and who worked in these bottoms when a boy, affirms that numerous good branches of tin are gone down, from which large returns were made, but which could not be followed, from want of capital to bring home the adit to unwater the lodes. The sett was taken up a few months ago, and an adit is now being driven to intersect the lodes, which will come in about 20 fms. under the old workings. It is confidently expected, that large quantities of tin will be returned by this adit. The central lode, which is now cut in the adit, is generally about 2 ft. wide; but was at first somewhat disordered by a cross-course. In driving towards the old workings the lode becomes more settled. There are now branches of excellent tin dropping into the lode, and large stones of tin in the lode; but as yet they are not very numerous. We are driving up to the pits, and are daily expecting to cut a bunch of tin. The south lode (known by the name of Great Shelstone) has been very productive, and hundreds of pounds' worth of tin has been returned above the adit. The lode is crossed by a caunter, where large quantities of tin appear to have been raised. In the valley adjoining this sett are the remains of 5 or 6 stamp houses, all of which were kept in work, stamping tin from the surface workings of the adjoining mines. There is sufficient water to prosecute this mine to a great depth. The country is soft red killas, lying on the foot of granite, which is a good strata for tin. The outlay on this mine will be trifling, and we conceive the adventurers would be amply remunerated.—JOHN SPARGO, superintending agent; THOMAS HOOPER, captain."—Since the foregoing report the agent writes:—"We find the adit which we are driving has drained all the shafts. We have found an arch of tin of good quality, which the old men left to prop up the ground as they sunk deeper. There is not a spoonful of water to be seen in either of the shafts on this lode. It is, therefore, our joint opinion, that we had better sink the shaft to come about 10 fms. under the old men's workings. This, we think, we can do without a horse-whim. We can have 10 fms. sunk for 20*l.*, as the ground is very soft. There must be thousands of tin in the top of this hill, just between the granite and killas, and, by driving an adit, we shall unwater all the old men's workings throughout the sett; and all may be taken away without the expense of a water-wheel, so that I need not tell you what your prospects are. As to the lode in the adit, I am happy to inform you, it is getting very regular. There are two branches, one of which is almost 1 ft. wide, the other about 4 in., and only a few inches apart. The lode is altogether very kindly, but not settled as yet."

ST. AUSTELL CONSOLS.—In consequence of a run of ground in the adit level, operations in the more productive parts of the lode have been necessarily suspended, the water having risen above the adit level; but, within the last few days, the water has been let down, which has enabled them to resume work.

WHEAL AGNES.—This mine is situate in the parish of Beer Ferrers, in the county of Devon, about midway between Tamar Consols and the East Tamar Mines, with about 250 fms. on the run of the lode, north and south. Operations were commenced about two months since; in shoding, they found some stones of lead, which stimulated them to greater exertions; about 10 days since they cut the lode in Whitsun bottom, about 2 ft. 6 in. wide, with a leader of 15 in. of rich silver-lead ores, worth 25*l.* per fm. The lode has since been opened on between 3 and 4 fms., some portion being worth 50*l.* per fm.—the whole averaging 40*l.* per fm. A shaft is being sunk on course of the lode, and an adit driving, which, in 10 fms., will take the same at a depth of 15 fms. A wheel pit has been commenced, and active preparations making to erect a water-wheel of 50 ft. diameter, 2½ ft. breast—there being an ample supply of water necessary for all mining purposes, and which will enable them to carry the shaft to a considerable depth; arrangements are also being made for dressing floors, &c., and it is anticipated, that in from six to eight weeks, a parcel of from 15 to 20 tons of rich silver-lead ores will be ready for the market.—A lively sensation prevails in the neighbourhood from this unexpected and important discovery; and we are highly pleased at having this opportunity of congratulating the fortunate proprietors of the Great Maria, or rather Great Devonshire Consols, on this valuable accession to their already wealthy possessions; and we avoid contemplating the great fact that, when mining operations are carried on with prudent judgment and legitimate exertions, they seldom fail of answering the most sanguine expectations of mining speculators.

WHEAL BROTHERS.—A new mine, which has been recently put to work in the parish of Gulval, near Penzance, called Wheal Brothers, is likely to richly reward the few adventurers who started the undertaking. There has lately been discovered in this mine, a large tin lode, about five fathoms from the surface; and judging from the samples brought to grass, the quality of the ore is very superior. A company is being formed to carry out operations with spirit.

WHEAL ESSA.—A mine was started about four months since at Saltash, in Cornwall, called Wheal Essa, and has progressed well ever since. The shares (256) were taken up at 5*s.*, and were selling during the past week readily at 10*l.*—while at the present time the price may be fairly stated at 20*l.* They have driven on the lode 3 fms. from the shaft, and have a lode now 3 ft. big, of grey copper and silver ore.

WHEAL WILLIAMS (in Calstock).—It is stated, that a large and promising lode has been discovered in the River Tamar, running into this sett, which discovery has created a demand, during the past few days, for Wheal Fortescue shares, which mine is only separated on the east by the above river. It was rumoured, that it was the Maria lode which was cut; but this is not at all probable—as those better conversant with the locality assert, that that lode is considerably further north from the point of discovery.

WEST WHEAL SHEPHERDS.—We hear that this mine is looking favourable

LAMERHOOE WHEAL MARIA.—The engine-house is covered in, and the engineers proceeding rapidly with their work—so that no doubt need be entertained, but that the engine will be at work on or before the 30th proximo. The appearances of the mine hold out good promise as to results, but nothing can be said of a conclusive nature until the engine goes to work, and the lodes are developed at a greater depth.

HARROWBARROW (OLD) MINE.—Things here remain pretty quiet, and it is well they should remain so, until the shaft intersects the lodes at the Junction. It might be well to stope the shallow levels, meanwhile that the shaft is going down, and then drive east and west.

WHEAL WILLIAMS.—The lode in the river is now 9 ft. wide, carrying a leader of ore 8 in. big, very rich. This is supposed to be the Ford lode. It seems somewhat strange, it has never been cut in the Fortescue sett. These discoveries and explorations are highly important to the adjoining setts.

WHEAL BENNY.—The main (Benny) lode has been driven on 10 fms. east of the cross-course, where it is 5 ft. big, 2 ft. of which is saving work, the remaining part is composed of spar, capel, and mundic, impregnated with copper. A cross-cut has been driven 40 fms. south of the above, but has not yet taken No. 1 lode; therefore, it cannot have so fast an underlay as was calculated upon,—and consequently affords strong grounds for conjecture, that the three lodes will come together at a depth of 45 fms., there being only 15 fms. at surface between the backs. Another lode has been cut 150 fms. south of No. 4, 4 ft. big, with spots of ore, and which has every indication of yielding an abundance of ore in depth. There are now 13 copper and tin lodes opened on in this sett. In the eastern part of the sett little or nothing is doing,—but if active operations were to be prosecuted, there can be no doubt a water wheel (50 feet diameter) might be erected, the shaft cleared, cased, and divided, capstan, shears, and whim, all put in gear, and the water out in six weeks.

AN EXTRAORDINARY COAL MINER.—There is now living in the township of Butterworth, near Rochdale, a man named Joseph Taylor, aged 75 years, who at the age of five years began to work in a coal-pit. At the age of 10 years he commenced working as a regular miner, and has continued to work in a low mine in the pit up to the present time—a period of 70 years. He is in the employment of Messrs. Butterworth and Co., Haigh Hey Colliery, Butterworth; and, although he is so far advanced in years, he can manage to get eight loads of coal, at 6*d.* per load, in one day. He never worked in a mine above 2 ft. in height, and he never worked out of the township.

THE CORNISH PUMPING-ENGINE.—Among the many beauties of modern art which adorn the metropolis, are three beautiful Cornish pumping-engines, manufactured and erected by Messrs. Sandys, Carne, and Vivian, of Hayle—one of which is the largest in the City, and for workmanship is not surpassed. Another large engine is about being shipped by the above-mentioned firm, for the East London Water-works. Such machinery must undoubtedly reflect credit not only on the manufacturers, but on their agents.—*Penzance Gazette.*

BURDON MAIN COLLIERY, NEAR NORTH SHIELDS.—This colliery has been laid in for nearly three months, in consequence of the mine having become filled with water, which rose to about 14 ft. up the shaft. On the evening of the 7th inst., however, the water suddenly disappeared, and was found to have forced its way into the workings of Percy Main Colliery, the owners of which are at present engaged in drawing it off. The Burdon Main Colliery, will, it is expected, resume operations in a few days.—*Durham Advertiser.*

MINING IN CORNWALL AND DEVON.—No. V.

DEVONSHIRE GREAT CONSOLS.—These mines (the workings which were resumed by the present company under the designation of Wheal Maria, in August, 1844), are situate in the parish of Tavistock, Devon, about four miles from Tavistock, and bounded by the River Tamar—the distance from the shipping ports of Morwellham and Gawton being four to five miles. The sett extends 1485 fms. east and west, and 1100 fms. north and south—the lodes ranging east and west. The main lode—that of Wheal Maria—has only been opened upon at present, although the returns have been so great, as evidenced by the returns for the past year, exceeding 100,000*l.* Several other lodes have been discovered in the sett; but on which no operations have been carried on to call for observation; the principal shafts are those of Gard's and Morris's, at Wheal Maria. At Wheal Fanny, two shafts have been sunk; Wheal Josiah, two shafts—the other lodes being distinguished as Wheal Anna Maria, Wheal Jack Thomas, and Freemen Tor. The deepest point of working is on Wheal Maria lode, where the shaft has been sunk 50 fms. from surface. The sett is held under the Duke of Bedford, at 1-12th dues, for a term of 21 years, and is registered under the Act of 7 and 8 Victoria, cap. 110, for the registration of joint-stock companies. A committee of management, composed of Messrs. Gard, Morris, John Thomas, Thomas Morris, and W. A. Thomas, being in London; A. Allen, Esq., secretary; J. H. Hitchens, manager; and the offices of the company are at Nos. 16 and 17, Barge-yard-chambers, Blucklersbury. The mine is divided into 1024 shares, on which 1*l.* per share has been paid, the price quoted as the market value being 75*l.* The total returns up to the period of the accounts, ending 31st March last, comprising 13 months from the mine, becoming productive, and embracing the sales up to 19th February, was 13,674 tons 12 cwts., yielding 114,564*l.* 0*s.* 4*d.*, or an average of 8*l.* 7*s.* 6*d.* per ton, exclusive of carriage, which alone amounted to 581*l.* 14*s.* 1*d.* The profit divided for such period, on an outlay of 102*4l.*, being 72,70*4l.* paid to the adventurers, in shape of dividends.

WHEAL WALTER.—This mine is situate in the parishes of Milton Abbot, South Sydenham, and Lamerton, in the county of Devon, about four miles from Tavistock. The sett, which extends about 700 fms. east and west, and 400 fms. north and south, is held under Mr. Walter Weekes and others, the lessees being J. J. Hays, H. Smith, J. D. Poole, and W. Snell, for a term of 21 years, from 27th January, 1846, at 1-15th dues. Several lodes have been discovered, and operations are being carried on, with the view of ascertaining the capabilities of the sett, and those lodes which may hold out the most promise, and so determine on the point to which the main energies of the company should be directed. The mine is worked under the cost-book system, there being a London management or committee, consisting of Messrs. P. Davey, jun., John Edwards, J. D. Poole, J. J. Hays, H. Smith, E. F. Dayrell, J. Maitland, Major Graham, J. W. Lay, and W. Morrison; Mr. J. Crofts, secretary; Mr. Walter Weekes, purser; Capt. Jonathan Davy, agent at the mine. A report from the mine is forwarded fortnightly, which, with the accounts, is open to the inspection of the adventurers, at the offices of the mine, 4, King-street, Cheapside. There is no fee on transfer of shares. Bankers—the Union Bank of London.

MINERS' CLUB.

TO THE EDITOR OF THE WEST BRITON.

SIR,—I have often felt surprised that advantage has never yet been taken of the peculiar position and claims of Cornish miners to form for them a friendly society on a large and comprehensive footing. Much good, no doubt, is effected by the mine clubs in their present form, but how much more might be obtained from a different application of the same means? The superior benefits to be derived from clubs numerous in members are to well known to be here dwelt upon. The same number which would insure a sound and safe existence to one club, or one insurance office, utterly fails if divided among four, the averages of health and life being imperfect in comparatively small numbers, and improving as these increase. Several clubs exist in this kingdom embracing an entire county or some large body of people. I send you the annual sheet of one extending over the county of Essex. This has 20 branch committees for paying the sick, receiving contributions from the members, &c.—the whole corresponding with and accounting to a central office. In Devonshire, again, a very numerous and widely spread club exists, of which the Earl of Devon is president. Thus, have the members at once the advantages afforded by a numerous society, and also have the club brought home to their doors by means of local stewards and a local committee. We possess here in Cornish mines by far the most important element for forming a general club, viz.:—the existing payments to "club and doctor" are compulsory, and are deducted from the earnings. The management, again, is gratuitous, and no public house expenses, or the like, are incurred. A miners' club for Cornwall might be formed on the principle of having a local committee, stewards, &c., for one or more mines according to extent, with central office at Truro. The machinery of accounts would be conducted nearly as at present, and many individuals are always to be found among the miners well adapted for stewards and committee men. All working miners would be considered permanent members, although the particular mine in which they might be working should be given up. This would be an eminent advantage to the men, and would give them a life interest in the club. The doctor should reside at some point central to his mine patients. Our miners are computed to be, in round numbers, 30,000 persons. Admitting that women and children do not contribute—deducting one-sixth for these, and supposing that in one mine with another, the contributions amount to a 1*s.* a month for the men—we have 1250*l.* a month contributed or 15,000*l.* yearly. What an important sum is this, if duly applied on sound principles! This amount is, no doubt, subject to deductions from failing mines, neither is it of itself sufficient to provide sick pay and *annuities* for the miners. But it cannot be doubted that the adventurers, as companies, would contribute to so useful an institution as a club providing for the sickness and old age of miners, and individuals also would put down their annual subscriptions. Miners, above all men, stand in need of annuities after a certain age, from their so frequently becoming prematurely disabled for labour. To carry out this, some increase in the monthly payments might also be found necessary; but then, on the other hand, the men would have no occasion to subscribe to any other club than that of the mine, whereas at present they often belong to one or two more. The condition of men beset in their labour by so many evils in the shape of accidents, bad air, &c., loudly calls on their employers to profit, on the other hand, by any circumstances connected with their position which may lighten—and materially so—the severity of such occurrences. The facilities here indicated for forming an effective club seem to be among such circumstances. Mines, in fact, already possess nearly all the requisite machinery, and merely require a few connecting links to combine together its detached powers, and thus derive the full benefit that machinery is capable of affording. All honour to those who have promoted the introduction of man-engines, the distribution of soup among the miners, &c. Hospitals, too, have sometimes been talked of, and other institutions for them. But the persons who should, in this better informed age, carry out the wise and beneficient intentions of those who first established the compulsory monthly contribution for miners—these would bear away the great prize of utility to others and honour to themselves. We have not, for some time, Mr. Editor, seen any report of the proceedings of the Miners' Association, in the establishment of which you took a leading part. The great merit of its founders was, that they saw how to effect important objects with existing and moderate means; while others could not commence without a grant of 20,000*l.* or 30,000*l.* Let the directors of the association apply their system to the formation of a miners' club on the principles here indicated. Its restoration to activity could not be better celebrated than by such a movement.

Boskenna, April 25, 1846. JOHN PAYNTER.

SEATON NEW WINNING, NEAR SEAHAM.—This undertaking has at last been so far successful as to enable the proprietors to get through the limestone and sand at a depth of 70 fms. The winning was begun on the 31st July, 1844, and great engineering difficulties have occurred in the progress of the work. For want of sufficient engine power, the works were laid in for 12 months. Very large "feeders" have been met with, both in the sand and limestone strata, but all have been successfully encountered, and great credit is due to those who formed and carried out the important project. Some notion may be entertained of the difficulties, when we state that "feeders," producing in the aggregate 6000 gallons of water per minute, have been encountered, during the progress of the work, which have had to be stationed back or cut off by metal tubbing. The success which has attended the winning, and the manner in which the water has been overcome, is to be attributed to the great number of wedges that have been put in, which, we have no doubt, has saved many thousand pounds, and which, we hope, will be an example to other new winnings in the district; by these means, the water has been reduced, in this case, to 10 gallons an hour. The sinking is still proceeding, and, as the greatest obstacles are now got through, will proceed rapidly. The works are under the inspection and direction of Messrs. Hunter (Belmont), and N. Wood; Mr. A. T. Errington, the resident agent, and Mr. Coulson, the well-known colliery sinker. With the exception of Monkwearmouth Colliery, this colliery is nearer to the sea than any other in this district, and is close upon Lord Londonderry's railway to Seaham, so that no place can well possess greater facilities for shipment.—*Newcastle Advertiser.*—SEAHAM COLLIERY.—The workmen employed in sinking this projected extensive new colliery have just succeeded in getting through the sand, which frequently proves an insurmountable difficulty in colliery sinking, at a depth of 76 fms. from the surface, and have reached a thin seam of coal. The Hetton or Wallsend seam is expected to be found at a depth of about 200 fms. This new winning, which is situate in the richest part of the Durham coal-field, is upon the estate of the Marquis of Londonderry, at Seaham; and it will work the whole of the coal under his Lordship's extensive manors of Seaham and Dawdon, together with some adjoining royalties. When brought into operation, which it shortly will be, it must cause a great increase of best Wallsend coals into the London and other markets. The coals will be shipped at Seaham Harbour, from which port it is about a mile distant. Seaham Colliery is the joint property of what are termed the "Three Great Powers" in the coal trade—viz., the Marquis of Londonderry, the Earl of Durham, and the Hetton Coal Company.—*Local paper.*

THE MINING INTEREST OF SOUTH AUSTRALIA.—No. I.

BY FRANCIS DUTTON, ESQ.

We noticed the publication of an excellent work, in a former Journal, entitled *South Australia and its Mines, with an Historical Sketch of the Colony*, by FRANCIS DUTTON, Esq.,—at the same time stating it to be our intention to quote largely from the valuable and interesting particulars it contains, respecting Mining Operations in the colony—which, from their success and magnitude, have assumed very considerable importance. The information we shall, as occasion offers, place before our readers, will also prove an excellent recommendation of the work to our readers, and the public generally, as presenting a fair sample of the general contents of the work, which is by very far the best which has yet issued from the press, descriptive of the resources and management of this thriving colony.

We now, therefore, commence with the article on the Mining Interest, giving the author's own introductory remarks, which will be followed by the geological formation of the colony, classification of the rock system, and minerals generally, including iron ores.

"South Australia was already rapidly advancing towards a prosperous state; it had recovered from the shock it sustained during the years of depression, which had retarded, though not crushed, its rising importance; the settlers, generally, were fast getting out of debt, though none of them were rich, when a new impetus was given to their industry, by the discovery, in 1843, of rich mineral deposits in different parts of the province—made doubly important by the fact, that, in South Australia, no reserves are made by the Government with regard to minerals; by which means the owner of the soil was at liberty to extract those metallic ores from the ground, unfettered by Government interference. At the time when these discoveries were made, (most of them from fortuitous circumstances,) the colony might be said to have reached the very lowest point of its depression. It makes one smile, seeing the thousands of pounds sterling which are now being applied by the colonists to mining purposes; what a "change has come o'er the spirit of the times!" In the year 1843, the large quantity of 598 acres of land were sold by the Government, producing the very respectable sum of 613*l.* 13*s.* 9*d.* People were sick at the very idea of buying an acre of ground; and whereas now, every section of land which is put up for sale by Government, is minutely scrutinised—I might almost say with microscopic care—to discover any hidden treasures it might contain, part of those 598 acres above-mentioned, (namely, the original section of the present valuable Kapunda Mine,) was advertised in the Government *Gazette* for a whole month, according to the regulations, without any one troubling himself to go and look at it; by which means the present proprietors, who were alone aware of the existence of copper on it, purchased it for the upset price, without opposition, although any one of the many land-orders then in the colony unexercised, might have claimed it. Many people might wonder, that these metallic veins, cropping out as they do in many places on the surface, were not discovered long before; 300,000 acres were surveyed and appropriated by the different purchasers of land, and 300,000 acres more were surveyed and are still open to selection, and not a vestige of copper or lead was observed on them at the time; but one leading cause of this was, that parties who wanted land, always selected it, where practicable, for the rich quality of the soil; by this means they carefully avoided anything approaching to rocky or scrubby land, which latter are very generally the distinguishing features of country in which to look for minerals. The existence of the valuable metals was unsuspected by any one, excepting the geologist, Mr. Menge, who always foretold that the hills were metalliferous; those steep hills, therefore, where some rich mines have since been opened, were not ascended or inspected by the settlers—for the simple reason, that no man would, without a special object, go over a hill when he could go round it. Further, in travelling through the colony, people prefer going along beaten tracks; every one travelling on horseback, many persons may probably have passed over or near the mineral out-croppings, and not have cast their eyes on the ground—or, if they did, probably not one in a 100 would have been struck with the unusual appearance in the colour of the rock. The shepherds, however, who follow the flocks from morning to night, over hill and dale, were the most likely persons to have discovered them; but these, it is obvious, being uneducated, ignorant people, would not know that one stone was more precious than another. Thus, up to a very recent period, all the valuable discoveries were the result of mere accident, as will be noticed in speaking of the several mines. After one or two of the mines had been worked for a short time, and when people saw that such undertakings were likely to turn out something more than mere subjects to rail and laugh at (as was the case with the first mines), it was astonishing to see how suddenly, we all appeared to become learned in mining matters and mineralogy. Nothing was, or is now talked of, but copper or lead; hot days or cold days, early or late, people were to be met with amongst the hills, searching for mines far and near, almost bent double under the weight of massive hammers, and bags of stones, and most unmercifully were the poor rocks knocked about. As might be expected, most of them had their journeys for nothing, and were at great trouble in carrying weighty stones for many miles, only to find out that they were but stones after all, or else iron ores, which I may say, *en passant*, almost every acre of land contains more or less throughout the colony, but are of little value in the absence of coal. The importance of legitimate mining undertakings to the colony generally, was, however, soon impressed upon even the most timid and unbelieving; and already, at this early period, by the activity with which they were prosecuted, in little more than two years' time, has the produce of the South Australian Mines obtained a respectable and important footing in the English market. It needs no prophetic spirit to foretell, that in a very few years our mining interest will be a formidable rival to all other competitors, whether European or foreign. There is no such promising or legitimate field for the employment of British capital, as South Australia now holds forth; every circumstance which can conduce to the successful development of mining speculations is essentially in favour of our colony; and none of the causes which made most of the South American and other foreign mining concerns, since 1825, unprofitable to a proverb, can be anticipated, to cloud the sun of prosperity which has just risen over our favoured province. South Australia, in this, as in every other branch of industry, will bear the closest scrutiny, and strictest examination. It needs but to make the truth, the whole truth, and nothing but the truth, known, to convince the British public, that the time is come, when their capital ought to be diverted from being employed in foreign countries, amongst people with whom they have no genial and kindred tie of language or religion, where they have little law and less security, to a province which forms a portion of the British empire, is inhabited by their countrymen, under the rule of British protection and British laws, and which, moreover, affords them prospects such as few of the vaunted foreign mines can compete with. Acting, therefore, on the principle of avoiding every word which might be deemed approaching to exaggeration, I will confine myself strictly to the analysis of this important subject in all its bearings."

[*To be continued.*]

GREAT PUMPING OPERATIONS.—In July, 1843, the working of the Pendleton Colliery, said to be the finest and deepest pit within 100 miles of Manchester, was stopped by a great influx of water. The pit had been accustomed to supply 1000 tons a day to the Manchester market. Pumping engines of 400-horse power were erected in 1844, which, aided by other engines, continued to work night and day, till the 24th Dec. last. They raised, during the 12 months, from 3000 to 3500 gallons of water a minute, and, in the whole, no less than 157,680,000 gallons. By the end of last year, the water was so far reduced as to enable the workmen to commence operations, which have prevented the further influx of water. The level of the water is now 350 yards below the surface, and the coal 100 yards below the water. It is expected, however, that the higher coal will be reached in June or July, and that the whole of the workings may be resumed about Michaelmas. The colliery belongs to John Fitzgerald, Esq., of Pendleton, whose loss from the influx of the water was estimated at 50,000*l.*—*Newcastle Advertiser.*

MINE ACCIDENTS.

Churchway Colliery, Forest of Dean.—G. Terrett (aged nine years) was killed while following his employ in this pit, at East Dean.

Mynyddnewydd Colliery, near Swansea.—An explosion occurred here on Saturday last, by which four lives were lost. The accident took place soon after the workmen had entered the pit; and, as there were between 70 and 80 at work, it appears a miracle so many should have escaped. The pit is worked by the Swansea Coal Company, at the head of which is Mr. J. H. Vivian, M.P.

Tipton.—J. Barnett was killed by a fall of coal in Messrs. Haines's colliery.

Wednesbury.—J. Minck was killed by falling down Mr. Hackett's colliery.

Imperial Iron-Works, Lee Brook, near Wednesbury.—T. Orgill was literally torn to pieces by being caught in the machinery at the Brunswick Works.

Etherley Colliery,—As Michael and George Thompson were descending the Phœnix Pit, in a "loop," they fell to the bottom of the shaft, and were killed.

Wylam Colliery.—J. Armstrong was accidentally killed by a fall of stone.

Seatonburn Colliery.—M. Cook (aged 12 years) was killed by a fall of stone.

North Hetton Colliery.—As J. Pearson was taking off coal in the Hazard Pit, to lengthen the staple way station, he was crushed by a fall of stone from the roof.

Little Lever Colliery, Bolton.—J. Bellis was killed, while employed here.

There is a metallic substance in the British Museum, weighing 15 cwts., which is said to have been a projection from some planetary body.

The sudden demise of Mr. Frederick Edgell, the secretary to the Paris and Strasburgh Railway, and who was generally known in the City as connected with other associations, has, we regret to find, left his widow and orphan in a state much to be lamented. It will be, doubtless, within the knowledge of many of our readers, that the unfortunate gentleman died suddenly in an omnibus some three weeks since. We have reason to expect that some kind friends will provide for the orphan, by placing it in one of those valuable institutions with which London so happily abounds,—while, as regards the widow, we can only say that we shall most readily receive any subscriptions on her behalf, and which will, we believe, be also done with pleasure by the railway press generally.

IMPROVEMENTS IN TURN TABLES FOR RAILWAYS.—RAILWAY ENGINEERS have long COMPLAINED of the DEFECTS in TURN TABLES of the ordinary construction, of the EXPENSE, and also of the great DEPTH required for the pit and foundations of even the better kind of Tables, which have any claim to improvement in the arrangement of their parts.

RAILWAY DIRECTORS COMPLAIN of the FREQUENT BREAKAGE and EXPENSE in REPAIRING this portion of their stock.

PASSENGERS EXPERIENCE much ANNOYANCE from the loud and disagreeable JARRING NOISE at many of the principal stations, whilst the trains are passing over these unsteady and dangerous portions of the road.

It being admitted that the Turn Tables of a railway (and especially those which are placed on the main line) should be of reasonable price, of moderate depth in the pit work and foundations, easy to be turned, free from vibrations, deflection, and noise, it will require no apology for informing all those whom it may concern, that these DESIDERATA have been satisfactorily OBTAINED by the recent

IMPROVEMENTS PATENTED BY MR. DUNN, 29

AND MANUFACTURED BY MESSRS. R. OMEROD & SON, OF MANCHESTER, *THE SOLE PROPRIETORS.*

Examples of these Tables may be inspected at the Manchester Station of the Manchester and Birmingham Railway; at the Victoria Station of the Manchester and Leeds Railway, in Manchester; and at the Works, St. George's Foundry, Manchester.—May 21, 1846.

TO IRONFOUNDERS, BOILERMAKERS, AND OTHERS.—The directors of the Commercial Gas Light and Coke Company will meet at the office, at the works, on Wednesday, the 3d day of June, to RECEIVE TENDERS for IRONWORK, required in the construction of a CONDENSER and TAR TANK, according to plans and specifications, which may be seen, and particulars obtained, on application to the company's engineer, at the works, previous to the day above mentioned, between the hours of Ten and Twelve in the forenoon.—Tenders, sealed and endorsed, addressed to the secretary, to be forwarded by Twelve o'clock on the day above-mentioned.

The directors do not bind themselves to accept the lowest tender.

By order of the board, HENRY AVERY, Secretary.

Commercial Gas Light and Coke Company's Office,
Ben Jonson's-fields, Stepney, May 15, 1846. 30

THE PATENT SAFETY FUSE,

FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Tuborne, Cornwall. 31

COLOURED PHOTOGRAPHIC PORTRAITS,

By Mr. BEARD—to the superiority of which all the leading journals have so liberally borne testimony, are TAKEN DAILY, from Nine to Six o'clock, at

34, PARLIAMENT-STREET, WESTMINSTER,
65, KING WILLIAM-STREET, CITY, and
THE ROYAL POLYTECHNIC INSTITUTION, REGENT-STREET. 32

"There is no comparison between the early steps in the art, to those which have now been attained."—"The colours are decided, and of every tint."—"There is a depth of tone in the picture—a relief—a freedom—perfectly unknown before."

LICENSES to EXERCISE the INVENTION, in London or the provinces, GRANTED by Mr. BEARD (sole patentee of the Daguerreotype), 85, King William-street, City.

METALLIC PISTONS.—A case of the utmost importance to patentees (Goodfellow *v.* Barker) was lately tried before Sir F. Pollock, chief baron of the Exchequer, and which shows upon how slender a foundation rests an inventor's claim to the reward of his perseverance and ingenuity. The result of the above trial, which arose from an action being brought by the plaintiff against the defendant, for an alleged infringement of a patent for a metallic piston, was a verdict for the plaintiff of 40*s.* damages, consequently depriving Barker of the advantages professed to have been secured to him by the patent laws, and for which a large sum is obliged to be paid. Messrs. W. and C. Mather, of the Salford Iron Works, who had been the defendant's supporters, naturally indignant at the result, have addressed a letter to the *Mechanics' Magazine*, with the specifications of both plaintiff and defendant, with diagrams, and a copy of a letter addressed by Mr. Spiller, M.I.C.E., to Sir F. Pollock; and, on perusal of the former, it does appear to us strange, how any 12 jurymen, with mere common sense in operation, leaving scientific attainments out of the question, could establish the position of the plaintiff, that Barker's patent was an infringement of his patent, we cannot at all understand. In his specification the plaintiff does not claim for a metallic piston absolutely; but for the mode of arranging the metallic packing, consisting of concentric annular springs, screwed between the upper and lower plates; the points where the ends of the springs meet being rendered close by moveable segmental pieces, fitting corresponding recesses in the springs. The defendant, in his patent, also claims for a method of arranging the metallic packing, and which is, doubtless, a far more efficient one for the purposes required; while it is so entirely different in form, and application, that there appears to us no analogy between the two. The packing of the defendant consists of a helical spring, forming three complete turns round the piston, and which, by its action in its casing against the sides of the cylinder, keeps the piston steam-tight. In Mr. Spiller's letter to the judge, he, at considerable length and with much professional ability, draws a comparison, showing every point where the defendant's plan is not only different, but far superior to the plaintiff's: he deduces—1st, that the defendant's piston requires much less care and skill in its adjustment; 2d, embodies a twofold amount of elastic force for expansion; and 3d, that it admits in a far more perfect way, and without waste, steam into the cavity, between the back of the packing and the body of the piston. He concludes by asking the following important questions, which naturally arise from a review of the whole:—1st, Has the defendant a right to continue making his pistons for his own benefit, and the benefit of the public? The verdict declares he has not.—2d, Has the plaintiff a right to make pistons in all respects like defendants; and, if so, how will such pistons agree with his specification, which, by law, is bound fully and completely to describe the nature of the invention, and the manner in which it is to be performed? And, if not permitted to work on defendant's plan, without vitiating his claim, does it not follow that the verdict is unsound?—And 3d, If the plaintiff *has* a right to work on defendant's plan, and refuses—is the public to lose the advantages of the use of defendant's piston, until the expiration of the term of the plaintiff's patent? He justly observes, in conclusion, that these questions are much easier proposed than answered. By an advertisement, which appears in another column, it will be seen that a patent having been granted Messrs. W. and C. Mather, for their improvements in elastic metallic pistons, although unsuccessfully opposed by Mr. Goodfellow, the question as to a new trial in the case cited, may be considered set at rest.

INCREASED DEMAND FOR LOCOMOTIVES.—The want of engines for the immensely increasing traffic and opening of new lines in England, as well as abroad, has created great difficulties in supplying them. The demand has far outrun the means of supply. It is to this cause that the irregularity of several lines is to be ascribed. The following is related by the *Bury Herald*, and is *apropos* of the emergency. The directors of a certain company ordered 15 new engines, introducing into the agreement a condition, that unless they were ready by a certain time a penalty should be inflicted. The time specified arrived, but the steam-steeds were not in readiness, and the company notified to the engineers that the penalty would undoubtedly be enforced. One day the principal partner of the firm beheld a foreigner enter his counting-house, and, being introduced, heard him speak about engines, point to some half-dozen in an unfinished state in the work-rooms. It was explained that, however the workmen laboured, the engines could never be completed in time; and the consequence would be, that he and his partners would have to pay the penalty. "Oh! indeed," replied the foreigner in broken English, having first ascertained the amount of penalty imposed, "be good enough to complete them for me, and I will pay you your price and the penalty into the bargain. I came to England for such engines for the S—— Railway." The bargain was struck, and hearing of their loss the company immediately sent down a responsible agent to the same firm to order 15 more, but he received the following reply to his application:—"Oh, no; we can take no more orders yet abit. The foreign gentleman, to whom we sold the others, will keep us in work for 15 months."

HISTORY OF THE RAILWAY GAUGE.—In England 1900 miles have been constructed on the narrow gauge, and 274 on the broad. No public railways in England are at present laid down on an intermediate gauge, those which formerly existed having been reduced to the prevailing dimensions of 4 ft. 8½ in. The mineral railways of England vary from 2 ft. to 4 ft. 8½ in., the latter only being worked by steam. In Scotland the passenger gauge is 4 ft. 8½ in. In Ireland, under the advice of a Government Commission, 5 ft. 3 in. has been adopted as the national gauge, although some short lines have been laid down on 4 ft. 8½ in. In France the railways are, under Government instructions, universally laid down on the narrow gauge. In Belgium the first series of railways laid down by Government were all on the 4 ft. 8½ in. gauge, with the exception of one line between Ghent and Antwerp, which is laid down on a gauge of 5 ft. 9 in. In Brunswick the railroads are on the narrow gauge, as they also are in Saxony, Austria, and Bavaria. In Italy, between Leghorn and Pisa, there is a narrow gauge line, and those lines which are being constructed between Genoa and Turin are also on the narrow gauge. In Holland a gauge of 6 ft. 4 or 6 in. has been employed, and in Baden a 5 ft. 3 in. gauge. The railway between Basle and Strasburg is on a gauge of 6 ft. 3 in.—*The Railway System Illustrated.*

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Twelve o'clock.

Bank Stock, 7 per Cent., 206
3 per Cent. Reduced Ann., 95½ ⅞
3 per Cent. Consols Ann., 96¼ ⅜ ¼
3 per Cent. Annuities, 94⅜
3½ per Cent. Ann., 97⅛ 7 ⅛
Long Annuities, 10½
India Stock, 10½ per Cent., 264
3 per Cent. Consols for Acc., 96⅛ ⅜
Exchequer Bills, 1000*l.*, 15 18 pm.

Belgian Bonds, 4½ per Cents., 96⅛
Dutch, 2½ per Cent., 50⅛
Brazilian, 5 per Cents., 82
Chilian, 3 per Cents., 51
Mexican, 5 per Cents., 32½ 1½
Spanish, 5 per Cents., 24⅜
Ditto Deferred, 15½
Portuguese, 4 per Cents., 57½
Russian, 5 per Cents., 110½ 9½

MINES.—The market for mine shares has not been brisk during the past week, and but few shares have changed hands; among those, however, in which transactions have taken place, may be enumerated—Treleigh, Chypraze, Mendip Hills, Fortescue, West Wheal Maria, and Tamar, in English mines; and Copiapo and National Brazilian in foreign.

RAILWAYS.—The share market has been excessively flat during the week, and but little business has been done. Established lines of railway have, notwithstanding, maintained their prices, as but little inclination appears to be evinced to part with such shares, and buyers are almost confined to scrip, which is likely soon to return a portion of the deposit.

MEETINGS.—Birmingham and Gloucester, and Bristol and Gloucester: for the purpose of consenting to their consolidation with the Midland Company; which was agreed to unanimously.—Ayrshire and Galloway: the representatives of 11,245 shares were present, and, on the motion being put, 9620 were in favour of proceeding, and 1625 dissentients.—Stirlingshire Midland Junction: The shareholders at the meeting unanimously resolved to proceed.—Edinburgh and Glasgow: This company have 12 bills before the House of Commons for branches and alterations; and at a meeting last week, they were all agreed to unanimously.—London and South Western.—This company has seven bills for extensions and improvements, which were all unanimously agreed to.—Wilts, Weymouth, and Somerset: proceed, by a large majority.—Birmingham, Lichfield, and Manchester: proceed, by an unanimous vote of the shareholders.—Great Munster: A resolution was passed to the effect, that five shareholders be added to the board of directors as a finance committee, to ascertain the state of the company's affairs.—Tenby, Saundersfoot, and South Wales Railway and Pier: four-fifths of the scrip was represented, and a motion for proceeding was carried unanimously.—The Edinburgh and Peebles Railway decided not to proceed, by a majority of 5243 shares to 2082.—Glasgow, Kilmarnock, and Ardrossan: out of 17,115 shares, 14,610 were for proceeding with the bill.—Glasgow, Barrhead, and Neilston Direct Railway: unanimous for proceeding.—The Norfolk Railway Company; the Wilts, Somerset, and Weymouth; the Glasgow and Belfast; the Glasgow, Strathaven, and Lesmahagow; the Furness Extension; the Shrewsbury, Wolverhampton, and South Staffordshire; the Newmarket and Chesterford, were unanimously agreed to be proceeded with.—Wisbeach, Ely, and Cambridge: John Fryer, Esq., in the chair. The capital was 475,360*l.*, in 23,768 shares; 7900 shares was the number required to render the meeting legal, and there were present 17,959. The proprietors unanimously decided to proceed. The chairman, in addressing the meeting, said, he felt confident that the profits of the line would realise 10 per cent.; it is leased to the Eastern Counties at 4 per cent. and half profits. At the meeting of the Ulverstone, Furness, and Lancaster Company, it was decided by the majority not to proceed. There were present the representatives of 9429 shares, or nearly one-half the share capital, and 2*l.* per share of the deposits will be returned; in addition to which, it is hoped some arrangement will be come to with the Lancaster and Carlisle Company, by which the latter will contribute towards the Parliamentary expenses of the former—the two companies having acted in concert to defeat an opposition.—At a meeting of the Midland and Eastern Counties Railway, yesterday, at the London Tavern, after a very lengthy address from the chairman (Mr. Cobbold), much desultory discussion, and a motion for the winding up the company, the books in which the proxies and shares of persons present had been entered, were added up, when it was found that the number was not sufficient to constitute the meeting a legal one. The meeting was, therefore, adjourned to Friday next, for the purpose of obtaining the additional votes required to make up the proper number.—The Ipswich, Norwich, and Yarmouth, decided, yesterday, on the continuation of their undertaking; the number were—for the continuation of the undertaking, 26,470; against it, 6595; majority, 19,875.—The Shrewsbury and Herefordshire resolved unanimously on the continuation of their line.—At a meeting of the Newry, Warrenpoint, and Rostrevor scripholders yesterday, Lord Newry and Morney in the chair, it was resolved, to proceed with the bill, there being 3330 proxy votes in favour of proceeding; the amount required by the sessional order being 1670.—A meeting of the Templemore and Nenagh scripholders was held at the Gresham-chambers, Mr. W. R. Collett, M.P., in the chair. The chairman stated, that in consequence of their not having been able to make up the necessary 10 per cent., the extension to the Shannon had been abandoned; but that, should it be resumed in future, the present shareholders should have a preference. The Great Southern and Western would lease the line, which would, in cheapness and advantages, be an Irish version of the Northampton and Peterborough. Their expenses did not amount to more than 11*s.* 6*d.* per share, and the 10,500*l.* deposit was untouched. On the votes being taken, they represented capital, for proceeding, to the extent of 44,625*l.*, with only 5100*l.* against.—At special meetings of the Wilsontown, Morningside, and Coltness; the Slamannan, Monkland, and Kirkintilloch, and Ballochney Railways, on Wednesday last, at Glasgow, the proprietors unanimously approved of the drafts of bills for their various extensions.

The preambles of the following bills have been declared to be proved—viz., South-Eastern, from London to Chilham, proved as far as from London to Gravesend; Leeds and Thirsk; East and West Yorkshire Junction; Brighton and Chichester (Littlehampton branch).—The preambles of the following bills have been declared not proved—viz., the North Kent; the South-Eastern Company, as regards their line from Canterbury to Dover; the same company from Maidstone to Strood: ditto from London to Chilham, excepting the distance from London to Gravesend; Reading, Guildford, and Reigate, is to be constructed by that company, the South-Eastern Bill being thrown out; East Dereham and Norwich; North Norfolk.—Yesterday, the Morecombe Bay and Harbour Line; the Thames Junction of the London and Croydon Line; the Whaleybridge and Hayfield branches of the Sheffield and Manchester, were declared proved—rejecting the Manchester and Hyde Line. The committee announced, that they should report the Dublin and Sandymount Atmospheric Line for second reading.

The momentous question of the gauges is likely soon to be brought to a close, the Board of Trade are only awaiting the defence to be made by the Great Western Company, before they give in their report to the Government.

The consideration of the Cornwall Railway came before the committee on Thursday, when Mr. Austin, Q.C., Mr. Talbot, Q.C., and Mr. Sergeant Kinglake, appeared in favour of the bill. Sir William Molesworth was examined, and spoke highly in favour of the line.—Yesterday, Mr. A Fox, Sir C. Lemon, the Earl of Falmouth, and other witnesses, were greatly in favour of the line—the Mayor of Falmouth said that nine-tenths of the inhabitants of that town were in its favour.

The total amount of capital required for English and Scotch railways, the preambles of which have been declared proved, is 43,594,115*l.*; Irish railways, 11,952,414*l.*—together, 55,546,503*l.*

LEEDS, FRIDAY.—The fear we expressed a few weeks since as to the consequences that would ensue from over due speculation on the part of operators, appears likely to be verified, the tendency of prices being decidedly to lower rates, and stock coming freely in the market. The effect of Sir R. Peel's measure to facilitate the winding-up of railway schemes, was to give confidence, and produce a considerable improvement in all stock, both scrip and registered, as well as to render saleable many shares which had hitherto been a dead weight on the market. If the advance could have been confined to the old stocks, and the really practicable and legitimate schemes—in other words, if it had been confined within prudent limits—we might have anticipated with some certainty a continuance of the improved state of things; but instead of scripholders availing themselves of the way of escape opened out by the Government measure, they have been encouraged by the advance in prices, to vote for the continuance of many schemes, which would have been much better abandoned, and consequently prevented that distribution of the deposit money, in anticipation of which the improvement had taken place, and without which no present amendment in the money market can be calculated upon. While we regret, that much of the good effect of the Premier's measure has thus been prevented, we may hope that the obvious decline in prices that now shows itself, may convince those scripholders who have still to vote in the various schemes, that *all* cannot be proceeded with, and that unless they wish a return of the stagnation that existed two months ago, they must be resolute, in winding up worthless projects. R. B. WATSON, TOOTAL, & BARFF.

HULL, THURSDAY.—Our market is flat, and does not seem likely to improve In scrip, however, the transactions have been extensive, especially in South Midlands, Leicester and Bedfords, Shrewsbury and Birminghams, North British Carlisles, Matlocks, North Staffords, and West Riding Unions. In these stocks there is rarely, in this market, more than 1*s.* to 2*s.* between the buying and selling prices, for immediate settlement.

MESSRS. LAMOND'S SALES.—TUESDAY.—Leicester and Bedford (1*l.* 2*s.* pd.), 1*l.* 5*s.* 6*d.*; Reading, Guildford, and Reigate (2*l.* 2*s.*), 18*s.* 6*d.*; Rugby and Huntingdon (2*l.*), 1*l.* 1*s.* 6*d.*; Blackwall Extension (3*l.*), 2*l.* 4*s.*; East Indian (5*s.*), 18*s.*; Exeter, Yeovil, and Dorset (3*l.* 15*s.*), 1*l.* 16*s.*; Ipswich, Norwich, and Yarmouth (2*l.*), 1*l.* 3*s.*; North Staffordshire, Churnet, and Potteries (2*l.* 2*s.*), 6*l.* 5*s.*; Northampton, Banbury, and Cheltenham (2*l.*), 1*l.* 3*s.*; Leicester and Bedford (1*l.* 2*s.*), 1*l.* 5*s.*; Manchester, Buxton, and Matlock (2*l.* 2*s.*), 3*l.* 9*s.*; Warwickshire and London (2*l.* 2*s.*), 2*l.* 4*s.* 6*d.*; South Staffordshire (2*l.* 10*s.*), 2*l.* 2*s.* 6*d.*

MINES.—Asturian Mining Company (6*l.*), 1*l.* 18*s.*

MISCELLANEOUS.—Universal Salvage (5*l.*), 4*l.*

FRIDAY.—Cornwall (5*l.*), 1*l.* 18*s.*; North Staffordshire, Churnet, and Potteries (2*l.* 2*s.*), 5*l.* 14*s.*; Aberdeen (10*l.*), 4*l.* 5*s.*; Paris and Lyons (5*l.*), 6*l.* 13*s.*; Shrewsbury and Birmingham (2*l.* 10*s.*), 2*l.* 16*s.*; Vale of Neath (2*l.*), 1*l.* 10*s.*; London, Hounslow, and Western (2*l.*), 17*s.*; Direct Northern (2*l.* 10*s.*), 1*l.* 18*s.* 6*d.*; Great Kent Atmospheric (2*l.* 10*s.*), 1*l.* 12*s.* 6*d.*; South Midland (2*l.* 2*s.*), 1*l.* 12*s.*; Goole and Doncaster (2*l.* 2*s.*), 1*l.* 12*s.* 6*d.*; orthampton, Bedford, and Cambridge (2*l.* 2*s.*), 1*l.* 5*s.* 6*d.*; London and Manchester—Remington's (2*l.* 15*s.*), 17*s.*; ditto Rastrick's (5*l.* 5*s.*), 3*l.* 9*s.*

RAILWAY SHARE LIST.

RAILWAYS.	*Paid*	*Closing pr. last week.*	*Closing pr. last night.*
Aberdeen	£10	6	4¼
Amber, Nottingham, Boston, and Erewash Junction	2¼	2½	1½
Armagh, Coleraine, and Portrush—25*l.* shares	1¼	—	—
Birmingham and Gloucester—100*l* shares	100	125	124
Birmingham and Oxford Junction—20*l* shares	2	3⅜	2½
Bristol and Exeter—100*l* shares	70	85	88
Bristol and Gloucester—50*l* per share	30	50	50⅜
Caledonian—50*l* per share	5	12⅜	10⅜
Cambridge and Lincoln—25*l* shares	1¼	—	—
Chelmsford and Bury	1¼	—	—
Chester and Holyhead—50*l* shares	15	22½	21½
Cork and Killarney—50*l* shares	2½	—	—
Cork and Waterford—25*l.* shares	1¼	⅜	—
Cornwall—50*l* shares	5	—	—
Derby, Uttoxeter, and Stafford	2½	—	2
Direct Northern—50*l* shares	2½	1½	1½
Direct Manchester (Remington's)—20*l* shares	2½	⅜	—
Ditto Rastrick's	5½	⅜	⅜
Dublin and Belfast Junction—50*l* shares	10	7	3½
Dublin, Belfast, and Coleraine—50*l* shares	2½	⅜	6⅜
Dublin and Galway—50*l* shares	4	—	—
Dundalk and Enniskillen—50*l* shares	2½	—	3½
Eastern Counties—25*l* shares	14*l* 16*s*	23¾	—
East Lincolnshire	1½	1	23
Edinburgh and Glasgow—50*l* shares	50	77	1
Edinburgh and Perth	3	—	75
Exeter, Yeovil, and Dorchester—50*l* shares	2½	1½	—
Goole and Doncaster—20*l* shares	42*s*	¼ pm.	1½*
Grand Junction—100*l* shares	100	—	¼ dis.
Grand Union (Nottingham and Lynn)	1½	—	—
Great Grimsby and Sheffield—50*l.* shares	5	—	⅜
Great Southern and Western (Ireland)—50*l.* shares	15	24	—
Great North of England—100*l* shares	100	218	23
Great Western—100*l* shares	80	153	220
Guildford, Farnham, and Portsmouth—50*l.* shares	5	—	142
Hull and Selby—50*l* shares	50	103½	4⅜
Isle of Axholme	2½	—	103½
Lancaster and Carlisle—50*l* shares	25	57	—
Leeds and Carlisle	2½	1½	56½
Leicester and Birmingham—20*l* shares	22*s*	—	—
Leicester and Bedford—20*l* shares	22*s*	¼ dis.	¼ dis.
Leicester and Tamworth—20*l* shares	42*s*	¼ dis.	¼ pm.
Liverpool and Leeds Direct—50*l* shares	2½	—	¼ dis.
Liverpool, Manchester, and Newcastle Junction	1½	2¼	—
London and Birmingham	stock.	228	2
London and Birmingham Extension—25*l* shares	1½	—	225½
London and Blackwall	Av. 16*l* 13*s* 4*d*	7¼	—
London and Brighton—50*l* shares	50	66	7⅜
London and Croydon	Av. 13*l* 15*s* 9*d*	22½	64½
London and Greenwich	Av. 12*l* 15*s* 4*d*	9⅜	22½
London and South Western	Av. 41*l* 6*s* 10*d*	79½	9⅜
London and York—50*l* shares	2½	2¼	78½
London, Warwick, and Kidderminster—50*l* shares	2½	—	2⅜
London, Salisbury, and Yeovil—50*l* shares	2½	3½	—
Londonderry and Coleraine—50*l* shares	2½	—	2
Londonderry and Enniskillen—50*l* shares	5	—	—
Lynn and Ely—25*l.* shares	5	12¾	—
Lynn and Dereham—25*l* shares	5	7	13½
Manchester and Leeds—100*l* shares	82	125	6
Manchester and Birmingham—40*l* shares	40	82	123¾
Manchester, Buxton, and Matlock—20*l* shares	42*s*	1½ pm.	80
Manchester and Southampton	2	2	1 pm.
Midland	Stock	155	1½
Ditto Birmingham and Derby	Stock	124	150
Midland Great Western (Irish)—50*l* shares	2½	—	120
Newcastle and Berwick—25*l* shares	10	25⅝	—
Newcastle and Carlisle—100*l* shares	100	—	24½
Newcastle and Darlington Junction—25*l* shares	25	44½	—
Ditto New (Brandling)—25*l* shares	20	—	44
Newport and Abergavenny	2½	—	44
Newry and Enniskillen—50*l.* shares	2½	—	—
Newark, Sheffield, and Boston—25*l* shares	2½	1¼	—
North British—25*l* shares	17½	29½	—
North Devon	2	—	29½
Northern and Eastern—50*l* shares	45	72½	1
North Kent and Direct Dover—50*l* shares	2½	1½	—
North Staffordshire—20*l* shares	42*s*	4½ pm.	1⅝
North Wales—25*l* shares	3½	—	3½ pm.
Norwich and Brandon—20*l* shares	18	—	—
Northampton, Banbury, and Cheltenham	2	—	—
Oxford, Worcester, and Wolverhampton	12½	9	1
Perth and Inverness	2½	1⅝	8
Portsmouth Direct—50*l* shares	3½	3⅜	—
Preston and Wyre—50*l* shares	50	31	3⅜
Richmond—20*l* shares	5	—	30½
Rugby and Huntingdon—20*l* shares	2	1	16
Scottish Central—25*l* shares	7½	16½	1½
Scottish Midland—25*l* shares	5	—	16½
Sheffield and Manchester—100*l* shares	100	—	—
Shrewsbury and Birmingham	2½	3½	—
Somersetshire Midland	2½	—	2½
South Devon—50*l* shares	25	—	—
South Eastern and Dover	Av. 33*l* 2*s* 4*d*	40½	34*
South Midland—20*l* shares	42*s*	1½ pm.	39
South Wales—50*l* shares	5	2½	⅜ dis.
Staines and Richmond—20*l* shares	1	—	2½
Trent Valley—20*l* shares	5	⅜	⅜
Trent Valley and Holyhead Junction—20*l* shares	2½	—	—
Vale of Neath	2	1⅜	—
Waterford and Kilkenny—20*l.* shares	3	4½	1⅜
Welsh Midland	2½	1½	4
Wilts, Somerset, and Weymouth—50*l* shares	2½	3½	1½
Yarmouth and Norwich—20*l.* shares	20	—	—
York and Carlisle	2½	1⅜	—
York and North Midland—40*l* shares	50	—	1½
Ditto Selby—50*l* shares	30	74	98
FOREIGN RAILWAYS.			
Boulogne and Amiens—20*l* shares	10	12½	11⅜
Bordeaux and Toulouse and Cette (Mackenzie)—20*l* shares	2	2	—
Bordeaux, Toulouse, and Cette (Espalete)—20*l.* shares	2	2	—
Central of Spain—20*l* shares	2	1½	1½
Dutch Rhenish—20*l* shares	5	8½	7½
East Indian	¼	⅜	⅜
Great Northern of France (constituted)	5	14½	—
Great Western Bengal	¼	—	⅜
Great Western Canada—22½*l.* shares	3½	4	—
Jamaica and South Midland Junction—20*l* shares	1	2	1½
Jamaica North Midland	1	—	—
Louvaine and Jemappe—20*l* shares	4	1⅜	1⅜
Lyons and Avignon—20*l* shares	2	2	—
Luxembourg	4	1½	2
Namur and Liege—20*l* shares	4	4½	4
Orleans and Vierzon—20*l* shares	10	16⅜	—
Orleans and Bordeaux—20*l* shares	6	10½	10⅜
Paris and St. Quentin—20*l* per share	2	—	—
Paris and Orleans—20*l* shares	20	—	—
Paris and Rouen—20*l* shares	20	40⅜	—
Rouen and Havre—20*l* shares	18	29½	—
Sambre and Meuse—20*l* shares	6	5⅛	5
Strasburg and Basle—14*l* shares	14	—	—
West Flanders	4	2½	2½

* Prices obtained from country brokers—no business doing in the London market.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	*Traffic Returns.* 1846	1845
Arbroath and Forfar	15	£140,782	3½ *p.c.*	248 0 0	£ 182
Chester and Birkenhead	15	589,632	2½	731 4 6	782
Dublin and Drogheda	32	631,258	4	831 6 4	1026
Dublin and Kingstown	6	349,736	9	988 4 8	1002
Dundee and Arbroath	17	153,598	6	269 9 9	277¾
Durham and Sunderland	19	302,118	2	629 15 4	501
E. Counties & North. & East.	124½	4,090,328	5	8574 0 9	5431
Edinburgh and Glasgow	46	1,686,226	6	3486 6 2	3001
Glasgow, Paisley, and Ayr	51	1,104,773	6	2718 0 0	2373
Glasgow, Paisley, & Greenock	23	806,134	2	960 0 0	1004
Grand Junction Company *	119	2,597,317	10	—	10096
Gravesend and Rochester	7	85,000	—	214 14 5	295
Great North of England	45	1,296,196	6	—	2281
Great Western	220	8,179,980	8	19651 4 3	19915
Hartlepool	—	—	—	1011 3 8	—
London and Birmingham†	176	7,417,217	10	37711 9 11	23549
London and Blackwall	4	1,078,851	1½	1105 11 7	1448
London and Brighton	69	2,653,673	7	4539 0 0	5574
London and Croydon	10	842,592	3½	1478 12 8½	1754
London and South-Western	93	2,520,724	10½	7262 6 7½	7369
Manchester and Birmingham	31	2,197,585	6	4431 3 6	5556
Manchester & Leeds	51	3,972,869	8	6086 11 2	7365
Manchester, Bolton, & Bury	10	842,725	6¾	1080 5 2½	1509
Midland Company	179	6,636,105	6	16341 17 4	13496
Newcastle and Carlisle	65	1,137,385	5	1958 3 4	1605
Newcastle and Darlington	22½	1,272,031	9	2964 10 11	1420
Newcastle and North Shields	7	316,869	5	460 0 0	425
Norfolk	59	573,816	5	1231 15 3	287
North Union, Bolton &c.§	32	1,060,551	6¾	—	1880
Preston and Wyre	22	432,914	2	685 8 7	603
Sheffield and Manchester	19	1,313,225	2½	1710 4 0	1617
South-Eastern and Dover‡	103	4,284,924	3½	7102 1 11	8391
Taff Vale	30	648,348	5	1284 2 4	1130
Ulster	25	356,353	3½	603 5 9	605
Yarmouth and Norwich‖	20½	250,037	5	—	287
York and North Midland	53	1,632,859	10	4944 12 7	2826
Paris and Orleans	82	2,082,916	8	6859 14 8	5848
Paris and Rouen	84	1,995,306	9	5653 0 0	5547

* The traffic return of this company is now included in the London and Birmingham
† Including the Grand Junction Company. ‡ Including the Greenwich line.
§ Included in the Manchester and Leeds. ‖ Included in Eastern Counties.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
235	Andrew and Nangiles	25½	35
1000	Barristown	4½	30
4000	Bedford	2½	5
128	Besore Lead Mine	—	35
320	Birch Tor Tin Mine	10½	12
8000	Blaenavon	50	40
100	Botallack	175	300
120	Brewer	—	10
10000	British Iron, New, regis.	10	19
—	Ditto ditto, scrip	10	19
128	Budnick Consols	—	30
100	Bwlch Cwmerfin	20	200
1000	Callington	19	27½
256	Caradon Consols	45	60
256	Caradon Copper Mine	9½	8
256	Caradon Mines	4½	36
256	Caradon United	24	16–25
256	Caradon Wh. Hooper	12	7
1000	Carn Brea	15	120
114	Charlestown	—	240
236	Chypraze	—	20
1900	Combmartin	5½	4½
128	Comfort	—	50
5000	Con. Tretoil Mining Ass.	3½	2½
128	Condurrow	31	47½
2560	Cook's Kitchen	—	6
1000	Copper Bottom	1	5
3200	Cornubian Lead Co.	3	—
1024	Cosheen	4½	25
240	Craddock Moor	9	33
128	Creeg Braws	120	80
500	Cubert Mine	11	30
1024	Devon & Courtney Con.	3	3½
1000	Dhurode	2	5
186	Dolcoath	—	80
10000	Durham County Coal	45	9
128	East Pool	5	40
9000	East Tamar Consols	1½	3⅝
—	East Wheal Albert	1	3
256	East Wheal Alfred	6½	100
94	East Wheal Crofty	—	400
256	East Wheal Kitty	¼	¼
128	East Wheal Rose	50	1100
123	East Wheal Seton	2½	16
512	Fowey Consols	—	80
20000	Galvanised Iron Co.	10	10
10000	Gen. Mining Co. for Irel.	½	½
1000	Godolphin	—	35
256	Gonamena	19	122
128	Gover	23	200
244	Grambler & St. Aubyn	—	29
100	Great Consols	1000	400
256	Great Calestick Moors	—	13
2560	Great Mitchel Consols	—	2
100	Grogwinion	5	20
1000	Gunnis Lake	1½	3
128	Hallenbeagle	—	50
1000	Hanson	5	3
1000	Harrowbarrow Old Mine	3½	4
1000	Harrowbarrow Consols	2	2
800	Hawkmoor	3	6½
6000	Heigneton Down Con.	1	2
256	Herodsfoot	19	15
10000	Hibernian	12½	1
1000	Holmbush	14	20
256	Ivy Tor	1½	2½
1200	Kirkcudbrightshire	1½	¼
2048	Lamerhoee Wh. Maria	6	5½
128	Lanarth & Penstruthal	—	150
2048	Lanivet Consols	2	5
200	Larkholes	1	3
160	Levant	—	150
1000	Lewis	12	4
128	Ludcott	3	3
2800	Marke Valley	10	4
20000	Mining Co. of Ireland	7	12½
1000	Nant-A'r-Nelle	2	2½
200	Nanterrow Consols	10½	15
128	New East Crowndale	7½	2
128	North Fowey Consols	10	25
100	North Pool	11	40
70	North Roskear	10½	420
256	North Treburget	2½	4
100	North United	41	20
128	North Wh. Providence	2½	10
956	North Wheal Rose	26½	30
15000	Northern Coal Co.	23	2
600	Old Delaboie Slate Co.	25	45
128	Par Consols	—	500
256	Penhallow Moor	15	5
100	Penrhiw	30	65
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
512	Plymouth Wh. Yeoland	1½	3½
10000	Rhymney Iron	50	33 4
256	Rose Consols	10	7
1000	Rosewall Hill	1	3½
1024	Roscarrock	2½	—
2500	Silver Valley	3	3
256	Sourton Consols	3½	5
128	South Caradon	10	410
260	South St. George	9½	16
200	South Harvannah	23	26
800	South Towan	10	1⅛
256	South Trelawney	8½	16
128	South Yeoland	16½	20
128	South Wheal Basset	—	190
124	South Wh. Francis	—	90
1034	South Wh. Maria	—	2
10000	Southern & Western, Irish	1	2

BRITISH MINES—*continued.*

Shares.	Company.	Paid	Price
256	South Wheal Rose	2	3
256	St. Austell Consols	6	20
1000	Stray Park	43	20
9600	Tamar Consols	3	5
6000	Tincroft	7	13
256	Ting Tang	67	20
128	Tokenbury	124	45
1024	Trelawney Consols	1½	1
5000	Treleigh Consols	6	3⅝
256	Trenow Consols	—	170
96	Tresavean	10	250
120	Trethellan	5	40
120	Treviskey and Barrier	61	120
128	Trewellard	12	25½
4000	United Hills	5	4
100	United Mines	300	900
128	West Basset	10	15
256	West Caradon	20	340
128	West Cargoil	2	15
512	West Fowey Consols	40	35
—	West Kekewich Consols	—	3½
256	Wheal Kekewich	4	10
256	West Providence	—	10
200	West Seton	—	50
120	West Trethellan	5	32
256	West United Hills	1½	5
256	West Wh. Friendship	3	10
3845	West Wheal Jewel	11	2½
2560	West Wh. Maria	⅛	3½
2560	West Wh. Mitchell	—	2
256	West Wheal Shepherd	—	16
256	West Wheal Tolgus	21½	21½
256	West Wheal Treasury	12	12
240	Westerlake	3	3
6000	Wicklow Copper	5	16½
256	Wheal Albert	10	8
128	Wheal Acland	13	10
256	Wheal Allen	⅛	4
368	Wheal Anderton	10⅝	11½
128	Wheal Ann	—	50
256	Wheal Blencowe	—	20
256	Wheal Boscastle	3½	9
236	Wheal Byon	⅛	3
128	Wheal Catherine	5½	10
256	Wh. Cleveland	2½	2½
68	Wheal Clifford	—	250
1024	Wheal Concord	3½	3½
256	Wheal Fortescue	4½	16
384	Wheal Franco	22	40
256	Wheal Gill	17½	29
1000	Wheal Harriet	1	—
128	Wheal Henry	—	5
109	Wheal Hope (Zennor)	23	25
256	Wheal Hope	7	1½
256	Wheal Jane	6	40
265	Wheal Kendall	11½	5
1024	Wheal Maria	1	700
4000	Wheal Martha Consols	4	4
256	Wh. Mary Ann	5	95
1024	Wh. Mary (Calstock)	2½	1½
256	Wheal Mary Consols	15	15
256	Wh. Mexico	5	6
256	Wheal Norris	9	10
128	Wheal Penrose	—	5
128	Wheal Pollard	11½	12
128	Wheal Prospect	4	9
128	Wheal Providence	34	40
128	Wheal Reeth	1	60
256	Wheal Robins	13	2
128	Wheal Rose	40	25
256	Wheal Salusbury	13	5
512	Wheal Sarah	2½	5
99	Wheal Seton	150	850
256	Wheal Sisters	25⅝	50
128	Wheal St. Cleer	21½	30
260	Wheal Trelawney	7⅝	140
256	Wheal Trevenna	3½	4
256	Wheal Trewennan	—	10
128	Wheal Venland	12½	20
256	Wheal Victoria	2	6
127	Wheal Virgin	—	20
1024	Wheal Walter	2½	5
256	Wheal Williams	2	24

FOREIGN MINES.

5000	Alten Mining Company	14½	1½
15000	Asturian Mining Co.	6	3
10000	Anglo-Mexican Co.	100	3
3374	Ditto Subscription	25	4
2000	Bolanos	150	4½
12000	Ditto Scrip	15	5
10000	Brazilian Imperial	20	4½
12000	Cobre Copper Co.	40	25
8500	Colombian Co. regis.	55	4½
5000	Ditto Scrip	—	
10000	Coplapo Mining Co.	14	2
30000	General Mining Ass'n.	20	14
5051	Mexican Company	59	5
12000	Mocaubas & Cocaes	25	9
29320	Rl. del Monte, regis.	28½	3½
	Ditto unregistered		3½
	Ditto Red Debentures	—	19
	Ditto Black ditto	—	17
	Ditto Loan Notes	150	117
7000	Royal Santiago	10	17
2000	Pachuca Mines	3	3½
11000	St. John del Rey	15	9½
43174	United Mexican	28½	4½

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, MAY 22, 1845.

	£	s.	£	s.	d.
IRON—Bar *a*..Wales..*ton*	8	0—	8	5	0
„ ..London ..	9	0—	9	5	0
Nail rods „	0	0—10	0	0	
Hoop(Staf.) „	11	0—11	5	0	
Sheet „ „	0	0—12	5	0	
Bars „ „	10	10—11	0	0	
Welsh cold-blast foundry pig ..	4	5—	5	0	0
Scotch pig *b*, Clyde	0	0—	3	10	0
Rails	9	10—	9	15	0
Russian, CCND *c* ..	0	0—16	0	0	
„ PSI	0	0—16	0	0	
„ Gourief	14	5—14	10	0	
„ Archangel	0	0—13	12	6	
Swedish *d*, on the spot	0	0—11	10	0	
„ Steel, fagt.	0	0—15	8	0	
„ „ kegs *e*	14	5—14	10	0	
COPPER—Tile *f*	0	0—92	0	0	
Tough cake	0	0—93	0	0	
Best selected	0	0—96	0	0	
COPPER—Ordin. sheets, *lb.*	0	0—	0	0	10½
„ bottoms .	0	0—	0	0	11½
TIN—Com. blocks *g*..*cwt.*	0	0—	4	7	0
„ bars	0	0—	4	8	6
Refined	0	0—	4	10	0
Straits *h*	0	0..	3	18	0
Banca	4	0—	4	1	0
TIN PLATES—Ch., IC *i*, *box*	1	10—	1	12	0
„ IX ...	1	16—	1	18	0
Coke, IC	0	0—	1	5	0
„ IX	0	0—	1	11	0
LEAD—Sheet *k* .....*ton*	0	0—20	0	0	
Pig, refined	0	0—21	0	0	
„ common	0	0—19	0	0	
„ Spanish, in bd.	0	0—18	10	0	
„ American ...	0	0—	—		
SPELTER—(Cake) *l*	18	5—18	10	0	
ZINC—(Sheet) *m* export.*	0	0—	30	0	0
QUICKSILVER *n* .....*lb.*	0	0—	0	4	6
REFINED METAL ....*ton*	0	0—	—		

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto. *e* In kegs ½ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash. in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[*From our Correspondent.*]

We have no alterations to notice—prices remaining the same as quoted in last week's *Mining Journal*. The metal market generally is very dull, and the accounts just received from India will probably deter the principal buyers from making purchases at present.

In SPELTER a few large parcels have been done this week at 18*l.* 7s. 6d., and 18*l.* 5s.; the market price must be considered as 18*l.* 10s., but without buyers.

[*From a Correspondent.*]

During the week about 250 tons of spelter have been sold on the spot at 18*l.* 5s. and 18*l.* 7s. 6d. per ton; for arrival nothing doing.—English bar-iron continues inactive, but for rails there are a few inquiries. Scotch pig has not been so active this week; sellers from 70s. to 72s. 6d. per ton at Glasgow, according to Nos. Swedish iron and steel continue dull of sale.—English tin is flat at quotations. Banca and Straits are firm at quotations, and a fair business doing.—In copper no alteration.—English lead 5s. lower.

GLASGOW PIG-IRON TRADE.

MAY 15.—There have been few transactions in pig-iron this week, from holders being very firm for higher prices, and which buyers are unwilling to give, unless necessitated to purchase. The principal sale during the week was 2500 tons (3-5ths and 2-5ths), at 72s. 6d. per ton, cash, for iron in store. We quote the price 69s. to 70s. for No. 3.; 72s. 6d. for proportions of Nos.; and 73s. to 75s. for No. 1.

BOMBAY, APRIL 15.—We have little change to note in the prices of metals, and the sales have been few; about 50 candies brazier's copper has been sold at 54½. The price of iron does not improve, notwithstanding high prices in England and diminished imports, which may be partly accounted for by the scarcity of money, but chiefly in consequence of a diminished consumption in the interior, consequent upon the high price. The sales reported are 115 tons British flat the bar at 30 rs. per candy; 150 ditto, at 29 rs. per ditto; 1300 cwts. sheet, at 7 rs. per cwt.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending May 16, was 18,855; amount of money, £78 11s. 3d.

PRODUCTION PER WEEK OF SCOTCH PIG-IRON.—MAY 14.

[FROM OUR CORRESPONDENT.]

	Furnaces in Blast.		*Furnaces in Blast.*
Gartsherrie	15	Glengarnock	5
Dundyvan	8	Omoa	4
Clyde	5	Carron	3
Calder	6	Shotts	3
Govan	4	Devon	2
Monkland	7	Blair	3
Carnbro'	4	Garscube	2
Summerlee	5	Castlehill	2
Coltness	3	Kinniel	4
Langtown	5	Muirkirk	2

Total, 92 furnaces—averaging 110 tons each = 10,120 tons.

TO IRONFOUNDERS.—WANTED, an AGENCY, in LONDON, for the SALE of CASTINGS, by a party who has a first-rate connection with builders, gas companies, ironmongers, &c.—Address (post-paid), "H. B.," 34, Norland-road, Notting-hill, London.

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY, AND STEAM-BOAT COMPANIES.

Messrs. W. and C. MATHER beg to call the attention of the above parties to their IMPROVEMENTS IN ELASTIC METALLIC PISTONS,

for which a PATENT has been GRANTED, although opposed unsuccessfully by Mr. Goodfellow (the patentee of a metallic piston, taken out in the year 1838)—thus setting at rest the necessity for a new trial in the cause of Goodfellow *v.* Barker.

The Solicitor-General conceived it to be a new and important invention, worthy of Letters Patent. The improvement being in combination with Barker's patent, feel confident that it is the best metallic packing yet known, and is peculiarly adapted, as an internal contracting packing, for piston-rods and ram-pumps of large diameter.

Messrs. W. & C. M. are now READY to RECEIVE ORDERS, and GRANT LICENSES to respectable houses for making the above.

W. Barker, engineer, Newton Moor; J. Mather, engineer, Beaufort-street, Chelsea, London, are also authorised to make them upon the same principle.

Manchester, May 5, 1846. W. & C. MATHER, Salford Iron-Works.

N.B.—W. and C. M. beg to call attention to the pamphlet containing the admirable letter of J. Spiller, Esq., M. I. C. E., to Sir Frederick Pollock, who presided at the late trial, which clearly shows the great *superiority* of Barker's piston, and its entire *dissimilarity* to that of Goodfellow's—containing also the evidence of one of the principal witnesses for the plaintiff, with the specification of both patents, and a full and lucid description, with a plate of the new patent.—Models may be seen, and pamphlets had (gratis), at the Salford Iron-works; W. Barker's, engineer, Newton Moor, near Hyde; and at J. Mather's, engineer, Beaufort-street, Chelsea, London.

WELCOME CHRISTMAS MINE, ST. AUSTELL.—(*From a Correspondent.*)—I hear of a most excellent lode of tin discovered here; stones from which I have seen, and they are unusually rich.

AUSTRALIAN COPPER ORE.—We understand that the *Templar* will take between 300 and 400 tons of Capt. Bagot's ore, as dead weight, to Port Philip. We should not be at all surprised to see many vessels from the neighbouring colonies calling in here to take in ores as dead weight, either for their home passages, or as cargo, for the purpose of carrying it to New Castle, New South Wales, where the abundance of coal will afford our friends in that country first-rate opportunities for entering into the smelting and manufacturing of copper.—*South Australian Register*, received yesterday.

BANK OF NEW SOUTH WALES.—A meeting of proprietors of this bank was held yesterday, when a dividend, at the rate of 10 per cent. per annum, was declared for the half-year, ended the 31st of December last, besides an addition being made to the reserve fund.—*Sydney Morning Herald*, Jan. 22.

RAILWAY TRAFFIC.—From our official returns it appears that the amount of traffic for the last week, on nearly 1800 miles of railway, was 142,169*l.*, thus accounted for:—80,615*l.* for the conveyance of passengers only, 35,166*l.* for the carriage of goods, and a remainder of 26,388*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 16,942*l.*—*Railway Chronicle* of this day.

SCREW PROPULSION.—The action, Lowe *v.* Penn, for infringement of patent, was argued before the Court of Queen's Bench, yesterday.—The Court will take time to consider, before delivering judgment.

COPPER ORES.

Sampled May 6, and Sold at Pearce's Hotel, Truro, May 21, 1846.

Mines.	*Tons.*	*Price.*	*Mines.*	*Tons.*	*Price.*
Devon Gt. Con. & Wh. Maria	124	£4 1 0	West Caradon	39	£3 11 6
ditto	120	7 10 6	Foldize	76	3 4 0
ditto	117	4 17 6	ditto	69	5 7 6
ditto	112	6 15 0	ditto	62	3 0 6
ditto	105	7 18 6	ditto	53	4 12 6
ditto	104	4 14 0	ditto	48	5 6 6
ditto	103	4 13 0	ditto	42	4 11 0
ditto	94	4 8 6	ditto	17	2 10 0
ditto	92	7 10 0	Fowey Consols	105	4 9 0
ditto	90	7 10 0	ditto	103	4 11 0
ditto	88	7 8 0	ditto	97	4 19 0
ditto	80	6 16 6	South Towan	101	3 5 6
ditto	63	5 19 6	ditto	45	3 14 0
Wh. Fanny	101	6 12 6	ditto	20	5 18 0
ditto	99	7 7 0	Wheal Lydia	54	3 1 6
ditto	66	8 1 6	ditto	54	5 7 6
ditto	65	6 14 0	Wheal Jewel	59	6 9 6
ditto	35	3 10 0	ditto	53	5 9 0
West Caradon	119	5 18 6	ditto	50	4 2 0
ditto	113	6 3 6	ditto	29	7 5 0
ditto	67	5 17 6	Holmbush	113	5 18 0
ditto	66	6 7 0	Bedford United	99	7 12 6
ditto	44	13 2 6	Wheal Maiden	65	4 1 0

TOTAL PRODUCE.

Devon Gt. Con .. Wh. Maria ... Wh. Fanny	1658	£10373	15	0	South Towan	264	£1017 16 6
					Wheal Lydia		
					Wheal Jewel	191	1086 2 6
West Caradon	448	2932	10	0	Holmbush	113	666 14 0
Poldice	367	1538	1	0	Bedford United	99	754 17 6
Fowey Consols	305	1416	1	0	Wheal Maiden	65	263 5 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	285½	£1789 15 0
English Copper	270½	1352 16 9
Vivian and Sons	591½	3822 12 5
Freeman and Co.	352½	2024 2 11
Grenfell and Sons	294½	1125 0 2
Sims, Willyams, and Co.	567½	3032 9 0
Williams, Foster, and Co.	1148	6902 6 3
Total tons	3510	£20,049 2 6

Average standard, 93*l.* 9s.—Average produce, 9.—Average price per ton, 5*l.* 13s. 6d.—Quantity of ore, 3510 tons.—Quantity of fine copper, 317 tons 16 cwts.—Amount of money, 20,049*l.* 2s. 6d.—Average standard of last sale, 101*l.* 17s. 0d.—Average produce ditto, 7¼.

Copper ores for sale on Thursday next, at Pearce's Hotel, Truro.—Mines and Parcels.—Consols Mines 881—United Mines 703—Tresavean 534—Perran St. George 300—South Caradon 300—Par Consols 200—Grambler and St. Aubyn 199—Treleigh Consols 179—Trethellan 173—Wheal Ellen 132—Treviskey 81—Barrier 65—Wheal Andrew and Nangiles 57—Wheal Comfort 46—Williams's East Downs 17—Wheal Henry 4—Pengilly Mine 2.—Total, 3843 tons.

Copper ores for sale on Thursday week, at Tyack's Hotel, Camborne.—Mines and Parcels.—Wheal Seton 790—Tincroft 522—Camborne Vean 500—East Wheal Crofty 481—South Wheal Basset 325—Fowey Consols 316—Dolcoath 275—Lanivet Consols 195—Godolphin 145—East Pool 120—Condurrow 103—Tretoil 51.—Total, 3823 tons.

COPPER ORES

At SWANSEA, for Sale, May 27.—Chili 100, ditto 74, ditto 71, ditto 65, ditto 45, ditto 7, ditto 71, ditto 4.—Cobre 80, ditto 76, ditto 74, ditto 73, ditto 70, ditto 50.—Berehaven 125, ditto 120, ditto 100, ditto 78.—Knockmahon 88, ditto 87, ditto 80, ditto 70.—Ballymurtagh 70, ditto 44, ditto 19.—Cuba, 90.—Llanidloes 13.—Nuevitas 6—ditto 4.—Total, 1854 tons.

BLACK TIN

Sold on the 18th of May, 1846.

Mines.	*Tons.*	*Price.*	*Amount.*	*Purchasers.*
Chypraze	4½	£48 2 6	£228 11 10	Bolitho; Williams.
ditto	1½	44 0 0	77 0 0	Bolitho.

Total tons, 6¼.—Amount of money, £305 11s. 10d.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 13 6—Buddle's West Hartley 15 6—Cragwood Hartley 12 6 Carr's Hartley 15 6—Davison's West Hartley 15 6—Dean's Primrose 13 9—Hastings' Hartley 15 6—Hedley's Hartley 13—Holywell Main 15 6—Old Pontop 13—Ord's Redheugh 13—Ravensworth's West Hartley 15 6—Smith's Pontop 13—Taylor's West Hartley 15 6—Tanfield Moor 15 6—Townley 14—West Hartley 15 6—West Wylam 14—Wall's End Bell and Brown 14 3—Bewicke and Co. 14 3—Benshan 13—Gosforth 14 3—Heaton 14—Hilda 13 9—Hedley 14—Killingworth 14—Wharncliffe 14—Wreckington 12 6—Eden Main 14 6—Finchale 13 9—Haswell 16 6—Hetton 16—Lambton 15 6—Russell's Hetton 15 3—Shotton 15 6—Stewart's 16—Trimdon High Main 14 6—Kelloe 15 3—Trimdon 15 6—Cowndon Tees 14—South Durham 14—Cowpen Hartley 15 6—Derwentwater Hartley 15—Sidney's Hartley 15 6.—Ships at market, 194; sold, 102; unsold, 92.

WEDNESDAY.—Adair's Main 13 6—Buddle's West Hartley 15—Carr's Hartley 15 6—Davison's West Hartley 15 6—Dean's Primrose 13 6—Hastings' Hartley 15—Holywell Main 15 6—Ord's Redheugh 13—Stewart's Hartley 14—Taylor's West Hartley 15—Tanfield Moor 15 6—West Hartley 15 6—West Wylam 14 6—Cowpen Hartley 15 6—Sidney's Hartley 15—Wall's End Bewicke and Co. 14—Gosforth 14—Hebburn 14—Hilda 13 6—Hotspur 13 9—Killingworth 14—Northumberland 13 9—Riddle's 14—Walker 14—Wharncliffe 14—Wreckington 12 6—Braddyll's Hetton 15 3 to 15 6—Hetton 16—Lambton 15 6—Morrison 14—Pemberton 14—Stewart's 16—High Main 14—Low Beach Burn 13—Seymour Tees 14 6—South Durham 14 3—Ships at market, 97; sold, 62; unsold, 35.

FRIDAY.—Buddle's West Hartley 15—Carr's Hartley 15—Hastings' Hartley 15—Ord's Redheugh 13—Smith's Pontop 13—West Wylam 14 6—Wall's End Bewicke and Co. 14—Gosforth 14—Hilda 13 9—Riddell's 13 9—Walker 13 9—Braddyll's Hetton 15 3—Kelloe 15 3—Low Beachburn 12—Seymour Tees 14 6—South Durham 14—Tees 15 6—Cowpen Hartley 15—Sidney's Hartley 15.—Ships at market, 48; sold, 33; unsold, 15.

NOTICES TO CORRESPONDENTS.

"H. M." (Birmingham), can obtain the information he seeks, by studying the Glossary of Mining Terms, in course of publication in our Journal.

ERRATA.—In Mr. Craddock's remarks, in the Journal of 9th May, on the vapour of ether, there are two errors; one is 10 lines from top—*for* "100 deg." *read* "110 deg.;" and the other, in 43 lines from top—*for* "being imparted," *read* "having imparted."

THE MINING JOURNAL

And Atmospheric Railway Gazette.

LONDON, MAY 23, 1846.

In last week's Journal we gave the total exports of coal, culm and cinders, for 1844 and 1845, from the Parliamentary return, and now proceed to give some of the details, which will be found highly interesting, as showing the vast advantages which have arisen from the reduction of the export duty, and the greatly increased foreign demand for British coal since the development of the railway system, and the consequent demand for iron. The most important item, perhaps, in the whole return, and one-quarter of the entire quantity exported, is that of coal to France—being, in 1845, 512,848 tons of large, and 126,493 tons of small, coal; cinders, 5160 tons; and culm, 3466 tons—together, 647,967 tons, value 220,879*l.*; while, in 1844, it amounted only to 304,911 tons of large, and 102,710 tons small; cinders, 2122 tons; and culm, 3159 tons—value, 147,336*l.*, or near 50 per cent. increase in 1845. We have on various occasions alluded to the impossibility of France obtaining sufficient coal from her own mines for smelting purposes, in the vastly increased, and still increasing, demand for her iron; and the above fact completely bears us out in all we have hitherto advanced, and speaks more than if we wrote columns on the subject.

The principal of the other exports—taking large and small coal, cinders, and culm together—have been as follows—viz.:

WHENCE EXPORTED.	1844.		1845.	
Russia	*Tons* 94,144	£33,380	*Tons* 150,422	£53,105
Denmark	140,608	43,546	168,158	52,214
Prussia	95,306	28,314	184,487	54,650
Holland	97,970	35,080	139,288	47,446
Germany	171,865	52,649	227,539	69,564
Italy	65,003	29,307	97,338	42,052
Malta	48,546	20,336	52,327	21,874
Turkey and Greece	34,448	15,235	56,776	24,434
Egypt	23,866	10,096	48,063	19,386
Algiers, &c.	17,564	5,349	20,889	6,055
East Indies and Ceylon	28,231	14,815	85,689	52,687
British North Amer. Col.	58,928	24,489	79,359	33,316
British West Indies	77,338	43,705	102,339	60,816
Foreign West Indies	26,592	12,452	22,154	10,260
United States	29,822	16,022	58,381	31,930
Brazils	20,601	9,597	30,038	13,732
Channel Islands	65,900	25,724	55,588	22,033

The following is a comparative statement of the shipments from 12 of the principal ports of England and Wales, in 1844 and 1845:—

PORTS.	1844.	1845.
Newcastle	*Tons* 602,152	*Tons* 1,069,737
Stockton and Hartlepool	237,166	286,851
Sunderland	220,434	428,400
Newport	148,888	149,890
Liverpool	75,479	123,456
Hull	45,400	42,789
Swansea	40,299	43,139
London	32,917	78,198
Cardiff	23,037	33,096
Llanelly	20,154	11,452
Whitehaven	12,734	1,084
Bristol	6,423	6,976

And from eight of the principal ports of Scotland, as follows:—

PORTS.	1844.	1845.
Borrowstounness	*Tons* 93,265	*Tons* 73,656
Irvine	46,415	35,403
Kirkaldy	30,119	20,779
Glasgow	23,017	29,376
Alloa	20,996	25,306
Greenock	17,818	23,316
Leith	15,666	9,721
Grangemouth	10,612	11,974

The total amount of duties received in 1845 has been as follows—viz.: exportation in British ships, 10,241*l.* 8s. 5d.; in foreign vessels, entitled to the privileges conferred by treaties of reciprocity, 5004*l.* 6s. 1d.; in foreign ships, not so entitled, 2026*l.* 14s. 10d.—Total, 17,272*l.* 9s. 7d. The increase in the export trade, in one year after the reduction of the duty, was as follows—viz.: Newcastle, 76 per cent.; Sunderland, 95 ditto; Stockton, 20 ditto; and the entire of the United Kingdom, 44 ditto.

A meeting of the shareholders in the (old) British Iron Company was held on the 20th instant, when the accounts were submitted—a report of the proceedings at which will be found in another column. We congratulate the proprietors on bringing to a close the affairs of this company,—while those who took an interest in the *new* company may congratulate themselves on the improved state of the iron trade, and that of the interest they have retained or secured. A resolution was carried, which, as one of the first we have met with, will doubtless have its desired effect on defaulters. We think it is only equitable, and that which should be fairly imposed on those who are unable to meet their engagements, and such as the proprietors who make up the deficit have a right to expect.

It is most pleasing to find that attention to mining pursuits is more particularly directed at the present moment, than—so far as our experience goes—we have ever heretofore found to be the case. It is, however, necessary we should enter into some brief explanation of that *particular* attention to which we have referred, inasmuch that it is hardly necessary to advert to the years 1824-5 and 1834-5, as evidencing a mining mania, whether with reference to mines at home or abroad, and which, we hope, have given a sufficient lesson to guard others from again falling into the errors then committed, from either too much confidence—and that, too, oft misplaced—and, CURTIUS like, leaping into the fathomless abyss. The results of mining operations, during the past 11 years at least, have been recorded in our columns truthfully; and a reference to the past will not only afford ample means for reflection, but also enable parties to judge of the present, and the prospects of the future.

It will at once be admitted, that the most sanguine never pretend for a moment to hold out profitable results as certain; for it is not only an axiom which no one will attempt to deny, that no one can see through the dead rock, although "indications" (that pleasing, tempting word) may induce the adventurer to embark his capital on the misrepresentations of interested parties. It would be an easy office to narrate the several valuable and productive mines, of times past and present—such as Consols, Tresavean, Carn Brea, Dolcoath, Cook's Kitchen, Tincroft, East Wheal Rose, North and South Roskear, East Wheal Crofty, not forgetting Wheal Maria, or, as she is now called, the Devon Great Consols—and, at the same time, to place, *per contra*, those upon which tens, nay hundreds, of thousands have been expended

coath, where a debt of 1400*l.* appears to exist—while we are not, we admit, in a position to say on whom the fault lies. We believe things are done loosely, but shall be glad to correct the impression which we allow is somewhat of an unfavourable nature.

There is certainly this advantage in scrip companies, much as we detest them—that the directors take good care, however they may waste the capital placed in their hands, that they do not at least get the mine in debt,—for they well know the consequences, inasmuch that their co-adventurers being unknown to them (for scrip is easily transferable), they take care not to involve themselves as regards any responsibility. Having said thus much as to mining managements, we now proffer some trite remarks on share management, and the system too oft pursued in London, with reference to transactions in shares, and the representations and misrepresentations which are too oft made, deceiving not only the individual, but creating a general distaste, if not disgust, to mining operations, where so much want of candour and honesty is observed, if not deceit practised. In the observations we may make on this point, we wish it to be clearly understood, that we avoid all personality,—for we verily believe that, were we to appeal to any one of those most likely to complain of our remarks, we should be met with the exclamation, that we are right,—while each would at the same moment cry out, "You cannot say that I am the man." Thus it is, that, at the "Hall of Commerce," as a public establishment, and certain private offices, whether brokers' or others—and in certain "holes and corners," to be found in streets, courts, and alleys—certain transactions take place in shares—in some instances the *principal* being the *unprincipled* jobber; in others, making a tool of the honest broker: in some instances again the broker being the principal, and the agent, while he evinces but little *principle* in robbing both the vendor and the vendee—at the same time that, for appearance sake, he must needs take his commission. The "game" has, indeed, arrived at such a point, that we confess our list of prices of mining shares, although the utmost care is observed in our endeavours to arrive at correct data, is the most unsatisfactory column which we present to our readers. It is impossible to know the motives by which parties are actuated,—while we have every right to suppose that all are honest; but when we find prices given by one party, say at 43*l.* per share, and by another at 30*l.*—a case within the past few weeks—one quoting 50 per cent., below that rendered by another; and the same parties, being in hourly communication with each other—and moreover, when on inquiry we find that some private object induces such quotations to be made—we feel that, while we are subject to animadversion for putting before our readers an imperfect list, or unjust quotations, we are at the same time exculpated from all censure as to intention.

It has been suggested to us, and we think with some good grounds, that a course might be taken, which would not only uphold mining, but would restore that confidence, which, we lament to say, is now so evidently on the wane. We have not space this week to enter at length into the details, but shall be happy to communicate with any parties on the subject, and to give insertion to their communications; while we may briefly notice the main points. In the first place, it is proposed that rooms, or premises, should be taken in a central situation in the City, and an association formed, the objects of which should be exclusively devoted to mining. That an annual subscription should be paid by the several members; and who, on the formation of the association, should be ballotted for.—That a room should be appropriated to plans, sections, and reports of mines, with a museum for the reception of specimens; and that the agents or representatives, as well as the adventurers, of the several mines, should be requested to furnish, from time to time, such information, or reports, as might be generally useful.—That the several members, who might wish to transact business in the purchase or disposal of shares, either direct or through their agents, should have every facility afforded them, and that no other business, than that appertaining to mines, be sanctioned.—That all be recorded in a book, to be kept by the clerk, so that reference can at all times be made, as to the market value of shares in any particular mine. We feel we have already said enough—perhaps, too much; but as the measure will shortly come under the notice of those most interested, we feel it our duty to give an early intimation. We can very well see some objections which may arise; but these will, doubtless, be met on the question being canvassed by those most interested.

The letter of a correspondent, inserted in last week's Journal, on the subject of the accident on the Brandling Junction Railway, with the report of Capt. CODDINGTON before us, leads us, from the absence of any information conveyed in the latter, to offer some few observations on the question at issue—which may be simply disposed of, as to whether there was cause for the fatal result, or whether such may be considered to be solely attributable to accident. To this last conclusion we must object,—for it must be manifest to all, either connected with railways, or whose attention has been drawn to them, that the death of the individual is attributable to a cause which required only an inquiry to be instituted to have satisfactorily established; while we apprehend, from the nature of the inquiry on the coroner's inquest being held, and the report of Captain CODDINGTON, that the subject was not properly understood, while, at the same time, the case must be familiar to our readers.

Our space will not admit of entering into detail, or to give at length the report of the gallant captain; and, therefore, we must content ourselves—as, indeed, must our readers—with a brief epitome or notice of the report. Captain CODDINGTON tells us, that he proceeded to Newcastle, and that he returned—and accordingly dates his letter from the "Railway Department, Board of Trade, Whitehall, April 23, 1846;" and Gen. PASLEY further states, that, as he knows nothing, he is "of opinion, under all the circumstances of the case, that it (the accident) could not possibly have happened without some obstruction having been placed, which could scarcely have been accidental." This really is "too bad." Did Gen. PASLEY read his sub-inspector's report? for, in such case, he must at once have admitted there were no grounds to assume, that any obstruction had presented itself. The report of Capt. CODDINGTON, we regret to find, is calculated to throw discredit on the railway department of the Board of Trade, for he has displayed an ignorance which could never have been contemplated from one in the position in which he is placed. If that he wished to conceal the facts, or to distort them, he has certainly adopted the most proper course; while we are bound to say, that when observing on the switches, or points, and the "precise" orders of the company, he at the same time admitts, that 10 miles per hour was the limit allowed for the speed of the carriages on that part where the accident occurred.

It is hardly necessary to direct attention to the absence of any report, or "opinion," in which Gen. PASLEY feels disposed to indulge, or the "conjectures" of the talented captain, as expressed in his report, as to the cause of the accident; for it is manifest that there is not only a disposition, but a determination, on the part of the "reporters," to avoid any inquiry, as to the real cause—which, we contend and feel, we are in a position to establish—that of the curve and speed. The first is dangerous with the present construction of engines and carriages; while the latter is, of course, dependent on the former. If that any improvement, therefore, as relates to the one can be effected, and thereby have its corresponding effect on the other, we can very well imagine the opinion which must be entertained of the manner in which the inquiry has been carried out; while we cannot but feel that the gentlemen appointed by Government have neglected the duty imposed on them.

As the matter will, however, be brought under the consideration of Parliament, it is, perhaps, unnecessary that we should further dwell on the subject; yet the present affords a fitting opportunity for again directing attention to GREENHOW's principle of the circular rail with the tuyre of the wheel, which, by its concave form, readily adjusts itself, and avoiding the *play* admitted by the present construction of railways; while the arrangement for traversing curves, by allowing the wheels to work on the segment of a circular frame, so as to adjust themselves to the curve, at once precludes all apprehension of danger. We could have imagined that General PASLEY, whose attention has been directed to the improvement under notice, would have well weighed the subject ere he allowed Capt. CODDINGTON's report to be presented, without any remark on his part; however, it daily becomes more manifest, that, until the public acts for itself, there are but little hopes to be entertained from the interposition of Government.

[FROM A CORRESPONDENT.]

The rapid development of the railway system over the entire continent of Europe, causing such an increased demand for iron, that it cannot be produced in sufficient abundance, has raised an interest in every iron district, in which capitalists are almost universally endeavouring to participate. In France and Belgium particularly there is quite a mania for joining in the working of iron and coal mines; and the following report of one of the large companies, at their annual general meeting, will give an idea of the profitable results from this description of investment. The Compagnie des Forges et Furneaux du Nord (Maubeuge), under the firm of HAUNOIR, SERRET, & Co., held their annual general meeting at Valenciennes, on the 4th inst.,—M. E. HAUNOIR, president of the directors, in the chair. The report congratulated the proprietors on the prosperous state of the affairs of the undertaking,—the large produce of which had always met with a ready and advantageous sale, not only to the trade, but in the completion of extensive railway orders, and which had enabled the directors to declare a dividend of 25 per cent. per annum. The operations of the society during 1845, as detailed in the report, and accounts, show that the active account amounted to 157,471*l.*, and the passive 147,635*l.*, shewing a difference in favour of the former of 9836*l.*, to which sum must be added 5 per cent., being the interest at 5 per cent for the 1465 shares issued, and amounting to 2930*l.*, and for interest on the reserve fund since 1843, 566*l.* It then stated, that this satisfactory state of things had been brought about chiefly in consequence of successive improvements, which had been made in the different branches of the works, and the reduction which had taken place in the expenditure in the principal of their produce. The rise in the price of iron which took place in 1845, had affected but a small portion of their sales, in consequence of contracts previously entered into,—but the result of such rise would be manifest in the next returns, having entered into some new, important, and extensive contracts, on very advantageous terms. The result of the manufacture of pig and finished cast iron, during 1845, was—in pig iron, furnace No. 1, 7,571,212 lbs.; and furnace No. 2, 7,526,744 lbs.—total, 15,097,956; and in cast iron goods, a total of 12,885,866 lbs.,—of which quantity, 6,702,954 lbs. was for railway chairs, and 6,092,912 lbs. for the trade. The total of pig iron made, including the produce above of furnaces 1 and 2, was 17,878,964 lbs.—of which 6,477,794 lbs. were sold in the rough, and 11,401,170 lbs. refined at the furnace. The total quantity of rough pig, and cast iron goods, sent out in the year, was 17,884,972 lbs.

The above returns would show the importance of the manufacture, and the progressive development of the capabilities of the company. The returns would be greatly increased during the present year, arrangements having been made for supplying any increased demand; extensive works were in progress—a new foundry was in course of construction, which in a short time would enable the produce to be greatly extended. With respect to the state of the blast furnaces, they have been constantly in full blast, as well as the resources of the country would allow—one being out of order, a new one would be constructed without delay. The production of coals by the company, at the Fosse St. Felix, during 1845, was 359,365 hectolitres; of this quantity 159,463 hectolitres were sold to the trade, and 197,343 hectolitres consumed in the coke ovens, and there remained on hand, on December 31, 1845, 2559 hectolitres. The coke ovens, which had been built, had given the most satisfactory results, both as to the quality of the coke, and economy in conveyance, which expense would be still further reduced, if the projected railway from the coal basin of Mons to that of Sambre, which had been surveyed, should be carried out. Anticipating that result, an arrangement had been entered into with the railway company, for a branch railway to the coal works, and connecting them with the railways and the canal of Mons; and on the completion of such arrangements, which would greatly facilitate their coal operations, it was intended to sink another pit, and thus secure a constant supply of fuel to the furnaces, rendering them independent of any rise in the market. The quantity of iron ore raised by the company during the year was 27,125 cubic metres—producing 22,140 cubic metres of picked ores. Lime stone, of excellent quality, is obtained from quarries in the forest of Tilleul, granted by Government to the company; and a new road was to be constructed from thence to the furnace, for its economical conveyance. The company have on hand contracts for 12,000 tons of chairs and 100 turn tables, for the Great Northern Railway and branches, Paris to St. Germain, Creil to St. Quentin, Amiens to Boulogne, and Dieppe to Fecamp Railways—in addition to which, there were numerous and very extensive orders on hand and in progress, which would secure an advantageous and regular market for a very considerable period. The new capital, proposed to be raised, was 120,000*l.*, in 3000 shares of 40*l.* each, and which may be considered represented by the general assets of the company. After a vote of thanks to the chairman and directors, the meeting separated.

The valuable property, now in the possession of this company, may be represented as follows—viz., two large blast furnaces, the heat from which work each a steam-engine of 60-horse power; and, connected with railways for the cars, two excellently-built foundries, moulding room, and all requisite buildings. A finishing shop, with steam-engine, and all necessary apparatus, modelling room, forges, warehouses, office, men's and managers' residences, school, canteen, and stables; 38 coke ovens, with all the models, implements, tools, lathes, &c. The land attached to the property consists of nearly 15 hectolitres, the concession of a mine of red oxide of iron, two lime-stone quarries, and the right to work the coal mines of Gunregnon, Paturages, and Jemappes, in Belgium; with a piece of land about three quarters of an hectare, a 25-horse power engine, and all the plant on the property.

CORNISH MINES.—In the course of Sir C. Lemon's examination before the committee on the Cornwall Railway Bill, yesterday, he stated that he had in 1838 drawn up a statistical account of the mining districts for the House of Commons. The wages in the mines in Cornwall, for the copper works alone, exclusive of tin and lead, amounted in the year 1838 to 480,000*l.* The total produce of the mines amounted in 1836, and this estimate was certainly under the truth, to 1,500,000*l.* The quantity of coal required to work the steam-engines of these mines was about 80,000 tons a year.

EXPORT OF SALT.—The quantity of salt sent from the United Kingdom to foreign countries in 1843 was 12,946,452 bushels; in 1844, 13,413,884 tons; in 1845, 14,319,482 bushels. By far the greater part of this vast quantity was exported from Liverpool; and the places to which it was sent embrace most of the principal commercial states, France excepted. Our best customers are the United States—they took last year 4,324,769 bushels; Russia took 1,784,140; Prussia, 1,570,001; the British North American colonies, 1,361,194; Holland, 1,168,820; Belgium, 1,027,666; East India Company's territories and Ceylon, 910,892; the west coast of Africa, the British settlements in North America, and Germany, stand next in the list; China took 30,028 bushels of white salt.

MINING HISTORY OF SAXONY.

A paper by C. Fox, Esq., "On the Statistics of the Mines of Saxony," was read at the Royal Cornwall Polytechnic Institution: he states that these mines, which have now been worked for six centuries, are under the special care of Government—that the regulations appear to have been successful in the working of the mines, and in the treatment of the ores in the admirable mining school, and in encouraging a spirit and habits of frugality, order, industry, and enterprise. Difficult as it is in Cornwall to obtain statistical data, as to education, health, &c., of the mining population, in Saxony it may be considered needlessly minute: it is not, however, without interest. It appears that, in 1843, the last year for which returns could be obtained, the silver amounted to 32,840 lbs., obtained from 9650 tons of ore, of which 3500 were reduced by amalgamation, 6150 by smelting, and—

Produced the sum of		£152,250	Bismuth	*Tons* 7	£1,030
Tin	*Tons* 114½	7,950	Nickell	12	3,450
Arsenic	226	2,560	Uranite pitch blende	12 *cwts.*	50
Lead	390	7,050	Cast-iron	2500	32,000
Copper	28	3,600	Wrought ditto	2770	57,000
Cobalt wares	475	58,500			
			Total		£325,400

The Government purchases all the silver ores after very careful assays. The principal material consumed were—156 tons of gunpowder, 1250 bundles of steel, 100 tons of wrought-iron, 152 tons of cast-iron, 42 tons of iron from the smith, 23,800 pieces of wood, 600 stamp lifters, 10,600 lbs. of leather, 4400 fms. of wire rope, and 14,000 fms. hemp do. There are 24 Royal mines, 435 worked by the communes, or by companies. The Hohenbirker is 283 fms. in depth; and the Thurmhofer Zug, 304 fms. deep, or 104 fms. beneath the level of the sea. The younger men only can work in these deep mines—their highest earnings seldom exceed 9s. per week. Exclusive of the iron and coal mines, there were employed 7740 men, and 1460 boys, of whom 135 were superintendents; 46 machinists, 495 carpenters, 92 machine-men, 172 smiths, 176 masons, 15 students, 3610 men underground, 1110 apprentices do., and 1330 labourers do., 170 stampmen and dressers, 254 boys, picking and sorting ores.

Amalgamation is limited to two classes of silver ores, both of which are almost free from lead, though one contains iron pyrites; the most advantageous ores are found to be those containing 3¾ ozs. of silver, and 34 lbs. pyrites, in 100 lbs. To 400 cwts., 40 cwts. of salt are added; the mass is then roasted, until the silver is converted into a chloride, which is then ground to an impalpable powder—10 cwts. of which, and 3 cwts. of water, are poured into casks, with 60 lbs. or 70 lbs. of iron, for the purpose of decomposing the metallic chlorides; when reduced to a uniform paste, 5 cwts. of quicksilver is added, and the cask is kept revolving for about 18,000 times, at the rate of 20 revolutions a minute, until a complete amalgamation is formed with the silver, lead, copper, &c.; the casks then being filled with water, are made to revolve slowly, and the amalgam collects at the bottom, leaving not more than one-eighth of an ounce of silver in the 1 cwt. of ore: 80 tons of ore are amalgamated in a week, the quicksilver is driven off by distillation, with a loss of about half an ounce to 1 cwt. of ore: the silver is then refined by cupellation; some of it, containing 25 per cent. of copper, is sent to the Mint to be coined.

COAL IN SCOTLAND.—Mr. Morton, the mining engineer, in the course of his examination before the committee on the North British (Carlisle Extension) Railway, said he had visited the Canobie coal-field, which was a very fruitful one, three miles by two, containing 55 ft. of workable coal in 10 seams, and had been but slightly worked. The present seams could be made available for a supply of 100,000 tons for 70 years. According to boring, the whole of the proved seams would give a supply for 200 years: the present yield was about 25,000 tons a year, which sold at 5s. 4d. at the pit's mouth, and of this quantity Hawick alone took 7000 tons per annum.

IMPROVEMENTS IN WORKING MINES.—M. Faucille submitted a paper, at a recent meeting of the Paris Academy of Sciences, on the means of enabling persons at work in mines, pits, reservoirs, &c., to continue their operations without danger or inconvenience from the carbonic acid gas which is found where there is not a free current of air. The means adopted by him are simple, and are based on the fact, that this gas is rapidly absorbed by steam. He connects a hose or pipe, having its open end in the mine, pit, or reservoir, with a steam-boiler of any kind, and thus sends a supply of steam into the place where the gas exists.

We refer our readers to M. MOTLEY's very ingenious plan for the upper works of railways, and also to his method for preventing the carriages running off the line—a drawing and description of which is given in another page. As far as we can judge, the plan seems well deserving the serious attention of all new railway companies, and appears so clear as not to require engineering knowledge to determine on its merits. A model of the rail is at our office, which we shall feel much pleasure in showing to those who may be desirous of viewing it.

We are authorised to state, that the Bristol and Exeter Railway Company have adopted preliminary measures to supply the country between Taunton and Frome with complete railway accommodation. It is intended to construct a line between those towns, which will communicate with Glastonbury, Wells, Shepton Mallett, and Midland Somerset, and establish the shortest practicable communication between London and Exeter, with the best access to Salisbury and Southampton. This is part of a comprehensive plan, which the directors of this company have designed, for extending the benefits of railway accommodation into all the districts in immediate connection with the Bristol and Exeter Trunk Line.

RAILWAYS—(*From a Correspondent*).—The uneven jolting motion felt in railway carriages is caused by the spring of the rails bending under the weight of the carriages as they pass along the rail, and meeting, at intervals of 3 ft., the resistance of the chairs, which, from their solidity and position, do not yield to pressure. When the train first starts, and is going slow, this jolting and rebound is not so perceptible; but at speed, and particularly if the carriages are heavily laden, the resilience, or rebound, is much increased, and the carriages liable to run off the rail, especially where the rails are light, and possess great elasticity, more particularly at curves. This rebound also causes the rails to work loose, and the points to start up from the chairs—thereby rendering the rail highly dangerous. To remedy these defects, the rails should have a greater length of bearing and support on the chair; and in proportion to the length of support thus given to the rail, the less will be the uneven resilient motion of the carriages. By casting the rails on metal platforms (as proposed in Reed's patent), which may be made of such substance as to carry any weight, there would be an even, uniform, and almost imperceptible motion of the carriages; but still more important, less hazard and liability to accident. The least variation in the gauge, occasioning derangement of the rail, gives more play between the rail and flange of the wheel, and causes the lateral oscillation of the carriages, which may be obviated by placing chairs, connected together transversely, across the railway, as proposed by the above patent. An improvement in the smoothness of transit would be very desirable for merchandise, as goods of various kinds are often much damaged by friction. Taking into consideration a railway thus formed, the rapidity with which the rails may be laid down, the saving in labour from the number of plate layers, and other workmen, continually on the line to keep it in order, and that the metal, after many years' use, will preserve a great portion of its original value, and it may be, from the fluctuating price of iron, equal, or exceed its first cost, the difference in expense of forming such a metal railway, and one as now constructed, with all the costly machinery of preserving its repairs, will be more than compensated.

PEAT SUBSTITUTED FOR COAL AS RAILWAY FUEL.—On the line from Milan to Monza, an experiment has been tried which is of consequence for the future of locomotion. At some points, where coal could not easily be obtained, peat turf has been substituted with success, and with a saving of 30 to 40 per cent. on the cost of fuel. In Sardinia, where coal is rare, railways will find resources in the frequent bogs.

THE ELECTRIC LIGHT.—At the *soiree* of the Birmingham Literary and Philosophical Institution, Mr. G. Shaw addressed the audience upon the nature of voltaic electricity, which he illustrated by a number of exceedingly beautiful experiments, and concluded by exhibiting a model of the new electric light, invented by Mr. Starr, and patented by Mr. King, which was fully described in the *Mining Journal* of the 9th inst. Mr. Shaw stated that this invention furnished the means of applying electricity to the illumination of buildings, &c., and that the permanent magnet would be employed as the source of electricity, which reduces the expense to the small amount of mechanical power required to keep the armatures in rotation. The steadiness and brilliancy of the light were greatly admired by those present, as was evidenced by the warm applause with which it was received; and as this was, as we learn, the first occasion of its public exhibition, it has attracted attention.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

There has been another partial strike of the miners of St. Etienne, but it was not of long duration. The last accounts from that neighbourhood represent that all was orderly; but the miners were very discontented, and ready, on the most frivolous pretence, to abandon the pits. The company takes every measure that prudence can suggest, to calm their irritation.

Every day iron is coming more and more into use in this city. At this moment there is building entirely of iron a house in one of the passages.

The *Journal des Chemins de Fer* publishes the report of the Company of the Hauts-Fourneaux du Nord, from which it appears that the company's affairs are in a very prosperous state. The company is under engagements to supply 12,000 tons of *coussinets* to the Northern and other railways. The extension of its business compels the emission of 1500 shares, hitherto retained in hand. The profits of 1845, added to the interest unpaid of 1843 and 1844, makes a dividend of 250 fr. (10*l.*) to be paid on the shares disposed of to the end of December. This dividend will be paid on the 1st June, and in July the first quarter's interest for the present year will also be paid to the shareholders.

M. Delessert, of the Chamber of Deputies, proposed some time ago, that a resolution should be passed to the effect that, for the future, no amalgamation of mining companies, such as that lately effected by the coal companies of the Loire, should be legal. The resolution has been referred to a committee, which has reported upon it. It is now on the orders of the day of the Chamber, and will be discussed in due turn. In the report of the committee, some facts are stated which are worth quoting. It appears then, that in France there are 73 coal *bassins*, as they are called, extending altogether over 432,586 hectares. The bassin of the Loire covers 20,517 hectares, and is divided into 60 concessions. It is placed in the midst of the coal *gites* of Decize, of Blanzy, Essinac, Fins, Commentry, Bert, Brassac, Ardeche, Alais, Saint Gervais, Ronjard, and Meimac, which extend over 110,594 hectares, and are divided into 64 concessions. Many of the *bassins* in France have been conceded to a single company—as for instance those of Littry, Carmeaux, Decize, Aubenas, Bouxwiller, Plessis, Meimac, Estavar, &c. That of Littry comprises 11,586 hectares, those of Carmeaux and Decize upwards of 8000, of Aubenas 6061, of the other four upwards of 3000. The basin of Valenciennes is 49,248 hectares in extent, and is divided into 13 concessions (of which seven, of 26,564 hectares, are held by the Anzin Company), but only about 42,000 hectares are productive. It is contended that the monopoly of Loire companies cannot be dangerous to the public, since it has to compete with the *gites* of Decize, Blanzy, and other places named above, whose production is about 13,000,000 or 14,000,000 metrical quintals per annum, and which sell 8,000,000 in the departments of the Loire, the Rhone, the Isere, and the Ardeche, and send 5,000,000 or 6,000,000 to Paris, to Toulon, Marseilles, and the departments of the south and south-west. It is further contended that the dreaded monopoly of the company will not be found inconvenient, even in its own district,—for that, in point of fact, it is hardly a monopoly at all, the company possessing only 4900 hectares of the 20,517 of which the Loire bassin consists, and 28 of the 60 concessions. The total quantity of coal in the *bassin* is estimated at 200,000,000 metrical quintals, and the company's pits contain three-fifths of the quantity. The present annual production is about 14,000,000 metrical quintals, of which the company supplies two-thirds. The quantity of coal produced from the pits of Littry, Carmeaux, Anzin, &c., must naturally be greater than that yielded by the Compagnie Generale of the Loire, since their concessions are so much vaster in extent, and yet no objection is urged to them as monopolies. To the objection, that one company ought not to unite several different concessions, it is replied that the Anzin Company has united seven different concessions, with an extent of 26,564 hectares—more than that of all the basin of the Loire, and more than five times greater than that of the Compagnie Generale. As to the argument that the amalgamations effected by the company had already caused an increase in the price of coal, it was disproved in the Chamber; and as to the apprehension that the company will hereafter increase the price most considerably, the Minister of Public Works stated that it need not exist, for he had ample power to prevent any unjust increase. Upon the whole, then, it does not appear, as I stated several weeks ago, that any reasonable objection can be urged to the Compagnie Generale. It appears that it calculates the economies it will be able to effect, by its concentration of several mines under one management, at not less than 1,690,000 fr. per annum—viz., 300,000 fr. for incidental expenses; 300,000 fr. from the suppression of 30 steam-engines; 240,000 fr. from the suspension of the working of 30 *puits*; 300,000 fr. from supplies of materials, &c.; and 550,000 fr. from conveyance.

The Government, according to the newspapers, has determined on working the mines of rock salt in Algiers on its own account.

You will recollect that I have frequently referred to the fact of the acquisition of coal mines in Belgium by a French company, headed by Baron de Rothschild, and dwelt upon it as of great importance to the coalowners of England. The Belgian official organ, *Le Moniteur*, has, within this last week, contained a royal ordinance, approving the bye-laws of this company, called the Société des Charbonnages Belges, and creating it a *société anonyme*.

The object of the company is stated to be—1st. The acquisition and working of the coal pits of l'Agrappe and Grisceuil.—2d. The acquisition and working of the coal pits of l'Escouffiaux.—3d. The acquisition and working of the railway of St. Ghislain, and of its embranchments made, or to be made: the whole situated in the *arrondissement* of Mons.—4th. The acquisition and the working of other coal mines, railways, and furnaces, in Belgium, or the creation of a number of shares for such acquisition and working.—The company is to exist for 99 years. Its capital is 15,000,000 fr., divided into 30,000 shares, but only 20,000 shares are to be issued for the present. The affairs of the company are to be managed by not more than 10 directors—each of whom must possess 100 shares. The first three years the directors may be seven in number—viz., Baron J. de Rothschild, of Paris, M. J. Talabot, M. L. Talabot, M. Thurneyssen, M. Gosse, and M. Poisat, all of Paris, and M. Gendebien, of St. Josse-ten-Nood—but, after the first year, any six of them may elect one, two, or three other directors, so as to complete the number 10. The Belgian newspapers calculate that this company will exercise great influence on the coal trade, by increasing its supplies, and finding it new markets. The new markets will probably be France, and will no doubt be kept by the company to itself, for its own private advantage. Rothschild, Thurneyssen, and the rest of them, have the Great Northern Railway in their hands, which will give them an immense advantage in bringing their Belgium coals to the French market. The transactions on the Bourse in mining shares are becoming every day more important. The large interest paid by some of the old companies—especially the zinc—and the numerous orders which are sent every day to the iron establishments, have imperatively called the attention of capitalists to this department of enterprise.—*Paris, May* 18.

EMPLOYMENT OF ESSENCE OF TURPENTINE AS A SOLVENT FOR CAOUTCHOUC.—The extensive employment of India-rubber in the arts at the present day, and the continually newly-discovered purposes to which it is being applied, renders every discovery connected with its solution, or its chemical properties, of the utmost importance. M. Bouchardat having, 10 years since, been consulted by a manufacturer of water-proof fabrics, as to the best solvent for this substance, turned his attention particularly to the subject—at the same time the only solvents employed were naptha, and a distillation from caoutchouc itself. These pyrogenous oils he carefully studied, and separated from them several kinds of carburetted hydrogen, remarkable for their point of ebullition being very low: the oil of caoutchouc, however, would be far too expensive, and naptha has a most disagreeable smell, from which the fabrics cannot be freed—he, therefore, determined, if possible, to find another solvent. After many experiments on essence of turpentine—a known solvent, in a small degree—he succeeded in augmenting its solvent powers by open distillation on firebrick; by which process a liquid was obtained little inferior to the pyrogenous oil of caoutchouc, and which has now come into common use by manufacturers, both in France and England. The following are its properties:—Colour yellowish, smells slightly of thyme, oil of naptha, and turpentine, it is lighter than the essence from which it is made in proportion of 0·8726 to 0·8420; its boiling point is 85° centigrade, but the temperature immediately rises to 154°, and there remains stationary. By analysis, the distilled oil is precisely of the same composition as the essence from which it is made.

PHOSPHORESCENCE OF THE DIAMOND.—P. Riess, experimenting on the phosphoresecence of a large number of diamonds, found that in many of them, an exposure of half a minute to the sun's rays, caused them to give out light for 15 to 20 minutes, on being removed into the dark. The phosphoresecence produced by the red rays, continued longer than from any other of the colours.

METALLURGICAL TREATMENT OF LEAD ORES.—No. II.

The slag, which forms a thick crust on the surface of the bath of the lead, is removed by means of a ladle, and compressed by forcing the ladle, or skimmer, against a bar of iron, which is fixed across the basin, and the expressed dross is thrown into the furnace against the bridge. There the slags undergo a kind of liquation; the lead they contain runs from them into its proper receptacle. A little of the ordinary flux, composed of fluor spar and carbonate of lime, is thrown from time to time on these slags. The refusion of these slags lasts about an hour. During the time this operation is being effected, the lead already produced is being poured into ingot-moulds. The poor slags are opaque, white or clear grey. The scum, already spoken of, is re-fused in a half-high furnace.* The fusible slags, which are rejected, are composed of—

Fluoride of calcium	16·0	.....	13·6
Sulphate of baryta	25·0	.....	30·0
Sulphate of lime	22·5	.....	33·0
Sulphate of lead	22·0	.....	9·0
Oxide of iron and zinc	4·5	.....	4·0
Lime	8·0	.....	8·0
Carbonic acid and loss	2·0—100·0	...	1·6—100·0

By these analyses it is proved, that the flux employed at Lea, by virtue of its carbonate of lime, decomposes the sulphate of lead, which has been produced in excess. The oxide of lead set at liberty re-acts on the galena, which has not been roasted—reducing it, and, at the same time, being itself reduced, by converting its sulphur into sulphurous acid. The fluoride of calcium evidently acts as a flux, by rendering fusible the sulphates of lead, baryta, and lime, which, by themselves or mixed, do not fuse at the temperature employed. These reactions have been fully proved by the experiments of M. Berthier. Two atoms (about 80 parts) of fluoride of calcium and one atom (about 116 parts) of sulphate of baryta, give a substance which is perfectly fusible at a red heat. One atom of fluoride of calcium (about 40 parts), and one atom (about 70 parts), two atoms, or one and a half atoms, of sulphate of lime, give a very liquid product, at the same temperature as the mixture of fluoride of calcium and sulphate of baryta. One atom of fluoride of calcium, and one atom (about 150 parts), or two atoms, of sulphate of lead give a perfectly liquid product at the same temperature. Lastly, the three sulphates mixed with fluoride of calcium, also give a very fusible compound at the same temperature. From a review of these facts, it must be concluded that the careful employment of fluoride of calcium is especially useful, in rendering the sulphate of baryta mixed with the ore, fusible, as also the sulphate of lime, which may be formed at the expense of the lime contained in the gangue. If the oxidation has not been carried too far, it is not necessary to add carbonate of lime, for only a little sulphate of lead would be found in the slag. It is very difficult to guess at the exact proportion of sulphate of lead necessary to reduce the sulphuret. When the oxidation is not carried far enough, matts remain; and, when too far, sulphate of lead remains. The rich slags, which remain after running off the poor, are composed of—

Fluoride of calcium	7·2	.....	8·5
Sulphate of baryta	22·0	.....	24·4
Sulphate of lime	1·6	.....	5·6
Sulphate of lead	12·0	.....	30·0
Oxide of iron	15·4	.....	5·6
Oxide of zinc	7·2	.....	8·0
Lime	14·0	.....	14·7
Sulphuret of lead	17·6	.....	2·0
Carbonic acid and loss	3·0—100·0	...	1·2—100·0

The formation of these slags depends evidently upon the fact, that the sulphates exist in too large a quantity to be reduced to the liquid state by the fluoride of calcium employed. Hence the tendency to divide into two compounds—the one fluid and the other solid—between which the different elements are divided, as in glass, which has been de-vitrified. The formation of the rich slag depends then on a roasting, which has been pushed too far; the addition of lime is the consequence, and then ensues the formation of too large a quantity of the sulphates of lime and lead. The production of these slags cannot be avoided by increasing the dose of fluoride of calcium; for, by mixing the sulphate of lead in too large a quantity of slag, the metal can only be extracted by means of the half-high furnace. It would not even be convenient to prevent their production by a more careful roasting, and withholding the use of carbonate of lime as a flux. In all cases it is better to follow exactly the method in actual use, which consists in adding the fluor spar by degrees, until the mass becomes liquid, and only that quantity must be added. By this method the products are divided into three classes—the lead, the slightly fusible slags, which contain much sulphate of lead, and the very fusible slags, containing very little sulphate of lead. This arrangement is the most advantageous which can be adopted. The rich slags are treated in the half-high furnace. The furnace is charged, to within about an inch or two of the tuyere, with cinders from the ash-pit of the reverberatory furnace; the remainder of its capacity is filled with coke in small pieces, on which is placed the slag mixed with poor ores, which have carbonate of lime and fluoride of calcium as gangue, as well as the "fume" deposited in the chimney of the reverberatory furnace. Metallic lead and a new slag are produced by this treatment; these two products are run into the proper receptacle; after which the slag is run into a rectangular pit, filled with cold water—it then undergoes a division, and deposits grains of lead, which are afterwards separated by means of the stamps and washing. The metallic lead is run off into a cast-iron basin, surrounded with charcoal, and is then moulded. The slags contain—

Fluoride of calcium	13·4
Silica	13·0
Baryta	30·0
Lime	18·5
Protoxide of iron	14·5
Oxide of lime	2·5
Lead	1·0
Alumina	2·0
Sulphur	7·0—101·9

The sulphates here have disappeared; and in their place metallic sulphurets have been formed, which are difficult to determine—and silicates are formed at the expense of the silica contained in the ash of the coke. The fluoride of calcium is fused as it is added, and, by a singular chance, it becomes one of the most useful substances in the whole treatment. It possesses the property of combining with the alkaline sulphurets in the same manner as it combines with the sulphates, and gives rise to homogeneous and fusible compounds. M. Berthier has proved, for instance, that one atom of fluoride of calcium forms, with one atom of sulphuret of barium or calcium, homogeneous and fusible compounds. At Holywell the furnace employed differs from that in use at Lea, only in its proportions, and by the absence of the aperture for running off the slag; a single chimney receives the products of all the furnaces of the mill. This arrangement, which is principally adopted in England, is employed for the purpose of allowing the plombiferous matters carried away, time to deposit, and to convey to a very great height into the atmosphere the sulphurous acid produced. The chimney at Holywell is about 180 feet high, 29 feet external diameter at the base, and 11 feet at the summit. The ores treated at Holywell are very refractory galenas, mixed with blende, calamine, pyrites, and carbonate of lime, with no fluoride of calcium. They often are mutually employed as fluxes; the charge is about one ton, and the fuel an inferior coal. The first process is a roasting, which lasts about two hours; the furnace is kept at a very low temperature. The mass is then fused, raising the temperature of the furnace by closing the door; metallic lead and very rich slags are produced. The slags are collected on the hearth, where they are mixed with raw mineral, and the whole stirred well until perfectly mixed. The furnace in cooling allows the matts to congeal; a second firing is then given, so as to fuse the whole, whereby a new quantity of lead and slag is obtained. These last are treated afresh on the hearth of the furnace, by recommencing the series of operations already described, and a third firing given. Thus three roastings and three fusions are accomplished; for these last the fire is raised gradually, the third requiring the highest temperature. The slags are re-fused in the half-high furnace. In the mills at Grassington the ores treated consist of galena, mixed with carbonate of lead, and with a gangue formed of carbonate of lime and sulphate of baryta. The charge is about a ton. It is roasted for three or four hours, and then fused. The slags are *dried* with small coal and lime, stirred up on the hearth, and the operation repeated three times. Fluoride of calcium is sometimes added as a flux. Lastly, the bath of lead is always covered with a layer of lime. The operation lasts seven or eight hours. About 8 cwts. of fuel are consumed, and from 11 to 12½ cwts. of lead produced. The dross, slags, &c., are re-fused in the half-high furnace. The nature of the slags produced in these mills varies according to whether fluoride of calcium be added or not, and according to the quantity of that flux employed. M. Berthier has found in the slags which are not fused, and, consequently, formed under too small a proportion of the flux—

Fluoride of calcium	1·5		
Sulphate of baryta	51·0		
Sulphate of lime	10·6		
Lead, partly oxidated	34·0		
Oxide of iron	3·0	...	100·1

In the mills at Redruth, in Cornwall, the operation is divided. The mineral is submitted at first to a roasting in a reverberatory furnace. The charge is about 11 cwts.; the roasting lasts for about 12 hours, and 2½ cwts. of coal consumed. The roasted ore is transported to the reducing furnace, where the roasting is finished; it is gradually heated during three hours; it is then fused, and a bath of lead and slag is obtained. The treatment of the slags by small coal and lime, cooling of the furnace, and their alternate roastings and fusions, are executed in a manner analogous to that described above. The consumption of the coal is about 2 tons, and the charge of roasted ore about the same. M. Berthier has examined the slags and the deposits attached to the throats of the chimney of the reducing furnace. The results were as follows—

	Slag.		Deposit.
Silica	35·0	.....	20·6
Protoxide of iron	22·5	.....	traces.
Lime	19·0	.....	0·2
Oxide of lead	12·0	.....	71·2
Oxide of zinc	6·0	.....	0·0
Alumina	3·5—98·0	.....	7.4—99·4

The deposit is remarkable for the absence of sulphate of lead, evidently owing to the high temperature of the furnace, which determines the decomposition of the sulphate first formed by means of the alumina and silica of the brick employed in the construction of the furnace. These circumstances explain the extraordinary consumption of fuel in these mills. It depends, doubtless, on the nature of the ores, and not on the modification of the process; for the previous roasting can have no inconvenience, if it be not carried too far.

Treatment of Lead Ores in Reverberatory Furnaces at Pezay.—The treatment in this case is founded on the action air exercises on sulphuret of lead at a high temperature; a portion of the sulphuret is converted into oxide and sulphate, which is mixed as perfectly as possible with the unattacked sulphuret. The result is the production of metallic lead and sulphurous acid, or sulphurous acid and a subsulphuret of lead, which by a suitable modification of the temperature, is decomposed into metallic lead and simple sulphuret. Rough schlich (slime, sludge), is treated in the furnaces employed at Pezay; it generally contains about 76 per cent. of metal. This richness slightly varies, however, at different times. About 26 cwts. are acted on at once; the fusion takes about six hours, with the consumption of 141 cubic feet of fir-wood. The charge is made by two workmen, standing opposite to each other at the two doors at the extremes of the furnace, by throwing in the ore by means of curved iron shovels. When all the ore is placed in the furnace it is spread out, taking care, however, to keep it away from the doors. The furnace, being without fire during the time of charging and discharging, becomes much cooled, especially by the moisture always accompanying the schlich—so that, from the whitish red it was at the end of the fusion, it has become a very dull red. In order to reheat it, immediately after the charge a few billets of wood are thrown in; the fire then increases rapidly. Very soon after the fire has attained any degree of heat, there is an abundant evolution of sulphurous acid from the surface of the schlich. After one or two hours, drops of lead may be perceived escaping from that part nearest the bridge where the heat is greatest; but they are not visible for any length of time. Very few reach the receptacle for the metallic lead; for, being exposed to a current of air, they are rapidly converted into litharge. At the end of two hours and a-half the whole contents of the furnace is covered with a yellowish white crust, of from $\frac{2}{10}$ths to 1¼ inch in thickness. Under this *sulphate of lead* the schlich remains black, iridescent, and pulverulent. It is at this time the whole must be stirred, operating at the door near the bridge, because that is the hottest part—the other doors are closed. The workmen raise the crust, break it, mix it with the schlich by stirring slowly, and with great caution, otherwise the pulverulent schlich will be raised in clouds by each movement of the stirrer, and carried off by the chimney. The current of hot air, carrying away the finely divided schlich, burns it with a bluish white flame, and partly depositing it on the sides of the chimney in the state of sulphate of lead. Various analyses point this out by the composition of the deposit:—

	Gueymard.		Idem.		Descostils.
Sulphate of lead	88·36	.....	97·34	.....	82·71
Oxide of iron	2·40	.....	00·00	.....	5·00
Silica	2·20	.....	2·00	.....	5·77
Alumina	2·60	.....	00·00	.....	0·00
Sulphur	0·00	.....	00·00	.....	3·40
	95·56		99·34		96·88

At the end of about three hours the stirring ceases at the first door; the centre door is then opened, and the schlich there stirred with a rable—taking the same precautions as at first. The fire is now gradually increased; some little time after, the second opening is shut, and the third opened—at which the stirring, above described, is now carried on. After three hours and a-half the stirring is recommenced at the first opening, and the newly formed crust of sulphate of lead broken up and mixed as before; three workmen now are thus occupied at the three openings of the furnace. During the whole continuation of the roasting, sulphurous acid is disengaged, and sulphate of lead formed; and from this time the metal commences running from all parts of the mass operated on, continually.

At the end of five hours, the lead still continues to run, but in less quantity; and, in about an hour and a-half afterwards, ceases altogether. When the substances in the furnace, which were dry, give no more lead, they become immediately pasty, and the lead they may contain runs into the receptacle, at which time the workmen cease stirring, so that nothing may oppose its running off. At this time the flame of the furnace reaches as far as the centre door, and sometimes even further. The most suitable temperature is when the ore is in a slightly pasty state; and experience has proved that, in this state, the metal separates more readily and without matts, provided it be constantly stirred, so as to renew, as often as possible, the contact of the sulphate with the sulphuret of lead. For this purpose, at about the seventh hour, two workmen are placed at each of the end doors to stir the matter for about half an hour continually. After this time they withdraw their rables, which are nearly reddish white, so that they may not be longer exposed to such a temperature, because they would be rapidly destroyed by the action of the sulphur, contained in the sulphuret operated on. At the instant the workmen leave off stirring, a single workman takes his station at the centre door, stirring the substance in his turn, until his rable is red hot, at which time the workmen at the end of the furnaces resume their labour. The operation is thus continued, the fire being carefully kept up by the addition of billets of wood from time to time.

Errata.—Line 36, *for* "by after process," *read* "by an after process." Line 64, *for* "*Pb* 8," *read* "*Pb* S." Line 111, after "by which" insert a comma. Line 117, after "cases alone" delete "it is." Line 132, *for* "ash," *read* "arch."

MINERAL WEALTH OF NEW ZEALAND.—It is not, perhaps, generally known that, during the last three months, the eastern shores of the Waitemata, from Cape Colville to Coromandel, have been explored by Mr. Grayling, and the geological and mineralogical riches of that part of the coast fully ascertained. It is with the greatest satisfaction, that we lay before our readers a brief outline of the valuable products there discovered; and we trust that no long time will elapse before we shall be enabled to communicate throughout the colony the more detailed account which it is the intention of Mr. Grayling to publish, of the geology and mineralogy of that portion of New Zealand. The copper ore from that district, and from Kawau, contains an extremely great per centage, as the analysis of Mr. Grayling has most clearly shown—a per centage which has never been exceeded in any country. Galena, or lead ore, has been also found in abundance, containing (according to the same analysist) between 60 and 70 per cent. of lead, and about 15 ozs. of silver in every ton of ore. This, in connection with the quicksilver in New South Wales, will render the process of reducing and separating the silver much less expensive than to send to England. Tin has been also found, and likewise zinc—in fact, all the metals in some form or combination, are more or less plentiful. Sulphur is well known already to be abundant on the same coast, and it would be a good export for the India and China markets for the manufacture of gunpowder. There are also abundance of alkaline earths in the same district, and clays adapted for porcelain ware, besides a variety of saponaceous earths for wool washing. Tohitohi yields an excellent gum, and Mr. Grayling considers the gum found between the leaves of the native flax equal in its properties to Tragacanth. We trust that these few details of what has been found in such a small district, will stimulate others—for it must be borne in mind, that these natural products must be sought for with industry and enterprise.—*New Zealander.*

* Slag-hearth.

Original Correspondence.

THE ALLEGED DISCOVERY OF COAL IN UPPER EGYPT.

SIR,—Circumstances have hitherto prevented me from remarking, as I intended doing, on a notice which has recently appeared in the *Mining Journal*, of the finding of coal in Upper Egypt, in a letter from a person calling himself "Al Sowah," dated Syoot, 15th April last,—and which, if it were correct, might well be valued as promising immense advantages to that country, as it must engage the attention of mineral men in this. But it comes to us in such very doubtful guise, as will, I am inclined to believe, prove anything but satisfactory to practical miners.

In the first place, M. Al Sowah informs us of "several mines of coals" having been discovered, which, according to the tenor of his letter, we must infer were discovered all in one pit, and almost at one time! Now, "mines of coal" are extensive things, and one mine of coal for one pit would have been very sufficient. Attempts to prove too much are unwise, and worse than proving too little. And, talking of pits, he tells us that three pits had been sunk to a depth of 500 ft., which, be it remembered, is upwards of 80 fathoms—a work not to be lightly esteemed, even in our mining districts, and with all our aids and advantages,—but which, in an oasis of the Desert, may well be termed a "vast enterprise," and one which, had it existed to the extent described, was not likely to have been so long kept a secret, but that it must have attracted more attention at the Egyptian court than this seems to have done; for it is well known, that finding coal has been a favourite object with the Pasha for a considerable time past. We are told, by this account, that there were found in these three 500-feet pits (!) "the undeniable proofs of the existence of large beds of fossil coals." Here Al Sowah is getting out of his depth, and again attempting too much. I wish he could tell us how to discriminate between the evidences of large beds, and the evidences of small beds of coal, before cutting into them;—such a knowledge would frequently save much time and expense: but may this not prove a theorem of the new African principle, upon which the Bey Ayme is at work, in open contempt and defiance of the "the infallible opinion of the learned men of Europe?"

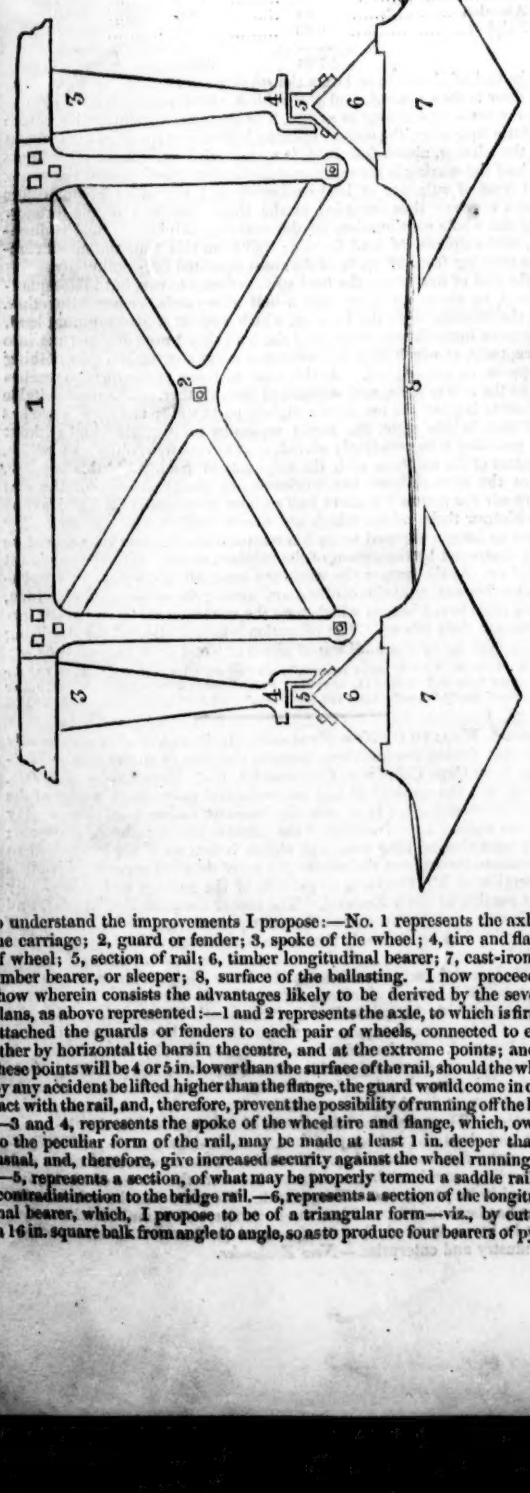
Well, this indefatigable Bey, not content with his three pits already sunk to the coal, or so near to it as to have obtained his "undeniable proofs," must needs go and sink another, from the surface, 117 fathoms deep, instead of taking advantage of his previous labours, by deepening one of those pits already sunk to 80 fathoms; and this, according to Al Sowah, in the astonishingly short space of time of "a few weeks" less than "within three months;" (!) for it is not to be supposed, that even this prince of sinkers would have commenced his fourth and deepest pit, until he had proved his three previous ones. By his own showing, Al Sowah does not appear to have witnessed these mining operations: if, indeed, he would have been much the wiser if he had,—or, to be much of a judge of coal, if he really did see it. And he talks of paying a visit to his particular friend the Bey, at his oasis in the Desert, which he was resolved to execute that very day, —just as off hand, and with as little ceremony, as you would anticipate a trip to Limehouse by the Blackwall Railway, or from London-bridge to Westminster by one of the penny steamers.

It, therefore, does not appear to me, that the really momentous question of the existence of coal in Egypt, or its dependancies, is at all affected by this report of M. Al Sowah, which is evidently unworthy of the least credit; and I fear the "dream" of the worthy Bey's "life," is likely to prove but a dream.—A COLLIER: *Newcastle-on-Tyne, May* 16.

IMPROVEMENTS IN THE UPPER WORKS OF RAILWAYS.

TO THE EDITOR OF THE MINING JOURNAL.

RESPECTED FRIEND,—Having for many years taken much interest in the introduction and progress of railways, permit me, through your Journal, to lay before your readers and the public, some suggestions, which, I humbly conceive, may be deemed improvements in what is termed the upper works of railways. It has often occurred to me, that it would be desirable, for the preservation of the timber bearers, to contrive some method of keeping a free circulation of air as entirely round it as possible, so as to prevent the tendency which moisture, and continual dampness, has to produce decay. The annexed engraving will enable your readers better



to understand the improvements I propose:—No. 1 represents the axle of the carriage; 2, guard or fender; 3, spoke of the wheel; 4, tire and flange of wheel; 5, section of rail; 6, timber longitudinal bearer; 7, cast-iron, or timber bearer, or sleeper; 8, surface of the ballasting. I now proceed to show wherein consists the advantages likely to be derived by the several plans, as above represented:—1 and 2 represents the axle, to which is firmly attached the guards or fenders to each pair of wheels, connected to each other by horizontal tie bars in the centre, and at the extreme points; and as these points will be 4 or 5 in. lower than the surface of the rail, should the wheel by any accident be lifted higher than the flange, the guard would come in contact with the rail, and, therefore, prevent the possibility of running off the line. —3 and 4, represents the spoke of the wheel tire and flange, which, owing to the peculiar form of the rail, may be made at least 1 in. deeper than is usual, and, therefore, give increased security against the wheel running off. —5, represents a section, of what may be properly termed a saddle rail, in contradistinction to the bridge rail.—6, represents a section of the longitudinal bearer, which, I propose to be of a triangular form—viz., by cutting a 16 in. square balk from angle to angle, so as to produce four bearers of pyramidical form, on the top of which the saddle rail is fastened by screw or nut bolts.—7 represents cast-iron chairs, or sleepers, made as light as consistent with required strength, about 3 ft. by 18 to 24 in. wide, and about 12 in. deep in the middle; the centre part of the sides to be about 3 in. higher than the extreme ends, in which is a recess, into which the timber is inserted, and secured to the sleeper by one or more bolts through the bottom; the inside of the chair to be filled with broken stone or gravel, and concrete, so as to form a uniform bearing for the timber; it will be perceived that the peculiar form of the chair, or sleeper, will keep the timber from 2 to 3 or more inches above the surface of the ballasting. If, however, timber sleepers be adopted, it would be needful, in order to obtain that object, to fix a 3 or 4½ in. block, or plank, in the middle of the sleeper, on which to fix the timber bearer; I propose these sleepers to be fixed about 2 yards apart. —8 represents the surface of the ballasting, which is supposed to be 2 or more inches under the timber bearer, and thereby keeping a free circulation of air around it.

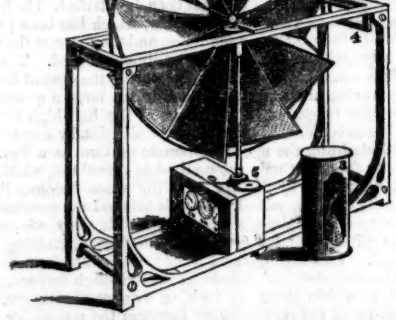
THE ADVANTAGES may, I think, be thus briefly stated:—1. A saving of at least one-fourth, or 25 per cent., in timber.—2. A like saving in iron.—3. The peculiar form of bearer and rail, affording the opportunity of a deeper flange to the wheel, and, thereby, *greater security*.—4. Greater durability to timber.—5. A saving of at least one-half of the labour required for keeping the rails in working order, on account of the peculiar form of the sleeper, affording a ready means of packing, without disturbing the ballasting.—THOMAS MOTLEY, C.E.: *Bristol, May* 22.

P.S.—I was informed, at the Dowlais Iron-Works, that a 40 lb. rail of the saddle form would be equal for firmness to a 60 lb. bridge rail, and I am fully persuaded that the form of timber bearers would affect an equally proportionate saving of material.

IMPROVED PROCESS OF EXTRACTING SILVER FROM THE ORES.

SIR,—Finding that the method, used at a certain German mine with great success, has been adopted by the Real del Monte Company, I am induced to address a word or two to those who may be (as I was) sceptical upon the subject—in order, if possible, to prevent speculation. That the ores, principally sulphurets, after being thoroughly pulverised (and the plan adopted by the natives, perhaps, is upon the whole the best), can, by the agency of salt, be decomposed, the merest tyro can prove—only using copper utensils, *without mercury*. As the process is, ere this, in full operation, I need not caution the holders of the forgotten Real del Monte to await the next mail, in order that they may reap the full advantage of so valuable, so simple, and (comparatively speaking) cheap, method of reducing the ores. The effect of the discovery, of course, cannot be fully appreciated; but thus much may be said, that mercury may remain in the hands of the monopolists at 4s. 6d. per lb.; and silver may be extracted at less than $\frac{1}{20}$th of the present expense, besides not losing more than from 5 to 10 per cent.—AN OLD SHAREHOLDER: *London, May* 19.

BIRAM'S PATENT ANEMOMETER, FOR MEASURING THE VELOCITY OF THE WIND, THE CURRENT OF AIR IN MINES, &C.—The instrument consists of a wind wheel, having vanes or sails, so formed that the action of the wind upon every part of them tends to produce one revolution of the wheel in the same time that the wind travels two feet. On the axle of the wind wheel is a worm, or endless screw, in which works a wheel with 50 teeth (1),—every revolution of which, therefore, indicates the passage of a



current of 100 feet of air. This toothed wheel is subdivided into 10 equal parts; so that an observer, noticing the number of revolutions and parts which it makes per minute, will have the velocity of the current in feet per minute at the time of observation. To facilitate the observation a minute glass (3) is sent with the instrument, which may be turned after the lapse of a few seconds, or as soon as the wheel has acquired an uniform velocity. By dividing the velocity in feet thus found by 88 (the $\frac{1}{60}$th part of a mile) it will give the velocity in English miles per hour. For registering the current of air for a length of time, the instrument is mounted on a frame, and connected with wheel work by a rod at 5, which gives motion to three indices, revolving in three circles, marked respectively "Ms." "Xs. of Ms." and "Cs. of Ms." denoting thousands, tens of thousands, and hundreds of thousands—the index of the first-named circle making $\frac{1}{10}$th of a revolution for 1000, the next for 10, and the last for 100,000 feet of air passing through the wind-wheel. So often as 1,000,000 feet are indicated by the wheel, the indices will all stand at Zero, or X, upon the different circles; but it is not necessary that they should be so placed upon the anemometer, being first fixed in any situation, provided observation is made of the position of the three indices at the time. Upon making a second observation, notice the position of the three indices (adding 10 to the number indicated by the Cs. of Ms. circle, if the index has in the interval passed X, or Zero) deduct the amount of the first observation from the last, and the difference will be the number of feet of air which has passed through the wheel between the two observations.

MACHINE FOR MEASURING THE VELOCITY OF THE PISTON.—This machine, the invention of Mr. J. Bache, of Perran, consists of a circular disc, free to move on its axis, by the friction of a circular rod against its edge; the rod receiving motion from the engine. On the face of the disc near its edge, at similar distances from centre, and equal from each other, are placed a number of inclined planes, having easy inclines on one side, and perpendicular faces on the other; the face of each being opposite to, and at same distance from, the incline of the next. Perpendicular to the disc, and so placed that the inclines shall pass in succession before it, is a pencil (or marker) constantly pressed forward by a spring, and kept in its place by working in a tube. As the disc turns, the pencil rises over the inclines, and falls over the perpendicular faces, each time at a distance proportionate to the velocity of the disc, and the rod moving it, which may be supposed to have the same motion as the piston. If the disc is made to revolve once at a known rate, by afterwards finding what part of the circle is jumped over by the pencil, and dividing such portion of time by the number of inclines, the velocities may be easily found.

FOOT PRINTS OF ANIMALS IN COAL ROCKS.—From *Silliman's American Journal of Science and Arts*, we learn that, about 27 miles from Greensburgh, Westmoreland County, Pennsylvania, on the summit of the Chesnut ridge of the Alleghany Mountains, have been discovered numerous remarkable imprints, which are very extraordinary, and have the strongest resemblance to the tracks of cloven-footed *ruminant mammalia*; they are of various sizes, and differ from most living types in having heel-like prominences, which have made impressions from 1 to 2 in. behind the main tracks. The length of the largest, including the heel-like impressions, is 8 in., and breadth 5 in.; the smaller ones varying from 4½ to 5½ in. long, to from 3½ to 4½ in. wide. The general form is oval; the largest part behind, and the hinder, or heel prints, are about the size of a walnut; there are five large and eight small tracks tolerably perfect, and many others much defaced; the steps have been from 1½ ft. to 2½ ft. apart. Besides these, there are five or six tracks of huge foot prints of a different character; they are in a continuous line, and each foot mark is 13 in. long by 9 in. wide, there are five toes from 1½ in. to 2½ in. in length, and the second of them is the longest: the average distance between the tracks is 3 ft. 7 in., with the exception of the two last, which are 7 ft. apart. This seems to indicate that there was at one time a track between, which has been since obliterated.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	*Address.*	*Day.*	*Hour.*
Royal Botanical	Regent's-park	Saturday	4 P.M.
Geographical	3, Waterloo-place	Monday	8½ P.M.
British Architects	16, Grosvenor-street	Monday	8 P.M.
Medical	Bolt-court, Fleet-street	Monday	8 P.M.
Linnean	Soho-square	Monday	1 P.M.
Medical and Chirurgical	53, Berners-street	Tuesday	8½ P.M.
Civil Engineers	25, Great George-street	Tuesday	8 P.M.
Zoological	11, Hanover-square	Tuesday	8½ P.M.
Syro-Egyptian	71, Mortimer-st. Cav.-sq.	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	8 P.M.
Pharmaceutical	17, Bloomsbury-square	Wednesday	9 P.M.
Royal	Somerset-house	Thursday	8½ P.M.
Antiquaries	Somerset-house	Thursday	8 P.M.
Royal Institution	Albemarle-street	Thursday	8½ P.M.

INSTITUTION OF CIVIL ENGINEERS.

MAY 12 and 19.—The President (Sir JOHN RENNIE), in the chair.

The first of these evenings was entirely occupied by the renewed discussion upon Mr. Williams's "Description of the New Works for rendering Navigable the upper part of the River Severn." The theory of the oblique weirs was strongly contested, on the ground that, although, by its obliquity, the obstruction to the stream was more gradual, yet, that the vertical obstruction must exist to the extent of the cubic content of the object placed in a channel of given dimensions. After much discussion, in which it was argued that the real position assumed by Mr. Cubitt, in his design for these weirs, had not been perfectly seized by the members; it was shown that the intention of the works was to place such weirs in the river as should at all times retain a depth of water sufficient for the navigation, even in the shoalest spots, but that such weirs should be so constructed as to permit of the free passage of the water, without raising it higher in times of freshes or floods than it had been raised in times of similar floods before the construction of such weirs. This, it was satisfactorily shown, had been done by the oblique weirs; and that the navigation, by means of the lateral locks, enabled a certainty of transport of merchandise to be attained which could not previously be thought of—and, at the same time, the drainage of the country had not been at all deteriorated by the regular medium height of the water in the river.

The paper read was "On the Combustion of Fuel under Steam Boilers, with a Description of Bodmer's Fire Grate," by J. G. Bodmer, M. Inst. C.E.—This paper, after drawing attention to the importance of insuring a more perfect combustion of the fuel used in furnaces than has hitherto been attained by the ordinary methods, proceeded to give a description of the new fire grate, by which the author arrived at the desired object.

The main feature of this grate, consisted in the ends of the fire bars being laid in the threads of two parallel endless screws, placed longitudinally beside the fire space, and revolving slowly, so as to move the grate bars gradually forward; the fresh fuel being thus received on a bare surface, and consecutively moved towards that portion in a state of ignition, a more perfect and effective combustion of the fuel, and the gases, was stated to take place, than could be obtained by the ordinary method of throwing the fresh fuel on an ignited surface, for in the latter case the gases suddenly developed, passed off to a considerable extent through the flues as smoke, without being ignited, and a considerable waste of fuel was the consequence, which it was the principle object of this grate to avoid. The fire bars, on arriving at the farther end of the machine, descended on to another parallel pair of endless screws, which had a contrary motion to the upper pair, and thus restored the bars to the front of the grate, where they were again lifted up to the upper screws by means of levers, and were in a position to receive fresh coals, and again to be moved onwards into the fire. A rocking motion was communicated to them by a drunken thread, so as to prevent the spaces from filling with clinkers.

The paper then proceeded to notice the applicability of this grate to all situations in which furnaces were required, and concluded by contending, that with the more perfect combustion that would be insured, a less draught, and consequently less fuel, would be required, which, it was maintained, was an object of great interest, when it was considered that millions of tons of coals were annually consumed in this country, and that with a daily increasing consumption the time might, ere long, arrive when any means, by which even a small saving of fuel might be effected, would be looked upon as of paramount importance.

Sir JOHN RENNIE, president, announced that the first of the series of his *soirees* would be held June 13, and that it was his intention this season to repeat them on the evenings of Saturday, June 20 and 27, and July 4. The members were requested to co-operate in procuring interesting models and works of art for these interesting meetings.

The paper announced for reading on Tuesday, May 26, was "On the Resistance to Railway Trains at various Velocities," by Wyndham Harding, C.E.

LIFE-PRESERVING AND SWIMMING APPARATUS.—A new and singular kind of invention for this purpose was lately exhibited at the Society of Arts, and is now to be seen at the Polytechnic Institution, the invention of Mr. John Keyse, of Crosby-row, Walworth. The principle of it is to give the sustaining power to the extremities, instead of to the body, as hitherto the object of other inventions for the same purpose. The apparatus consists of a pair of webbed gloves, which can be extended and contracted like a duck's foot, and give a vast power of propulsion. Next come air-tight conical armlets, connected to the gloves, which are detached into three parts, so as to leave the elbows and wrists entirely free for action. These being inflated, provide an additional buoyancy, which inflation can be increased by blowing into the self-acting valves for inflating the armlets, which is easily done by the teeth; and for diving—to secure a body, for instance—the valves are only to be pressed down, when the air escapes. On rising, a new inflation will enable the diver to support the body, and the power of the apparatus to bring it ashore. There are, also, cork clogs for the feet, secured by elastic straps and buckles, concave at bottom, possessing wonderful power of propulsion, and preserve the feet from depressing from long exertion—besides which they are a protection to the feet when landing on rough shores; and, from the effects of the concavity, would keep the feet from depressing in the sand. They also preserve from cramp, brought on by the curvature of the toes in the natural act of swimming. Finally, there are cross straps passing over the shoulders, for preserving the position of the armlets, when the inflation is discharged. The grand advantages of this apparatus are—that it dispenses with the life-boat, or the life-buoy, and gives the power of swimming to every one wearing the apparatus; for it gives him an additional buoyancy of 35 lbs., the natural buoyancy of a man of 11 stone being 8 lbs. only. There is also a patent life line, floatable in its nature, which could be easily drawn from a vessel to the shore by the wearer of this apparatus, in case of shipwreck; by passing over a reel on the vessel, and held by the men getting on shore, the line would be in constant operation for the saving of life. The result of the adoption of the two inventions, says Mr. Keyse, would be the saving of at least one-half of the persons annually drawn by shipwreck.

The *Oregon* steamer lately launched at New York (intended, we believe, to run between that city and Liverpool) is stated in the American papers to have run from Allen's Point to the foot of Fulton-street, New York, a distance of 130 miles "in 5 hours and 43 minutes," being at the rate of nearly 23 miles an hour! If there be no exaggeration in the case, this may be well called "the quickest trip on record." The *Oregon* is a vessel of 1000 tons burden, and 1100 horse-power; 330 feet long by (only) 35 beam; cylinders, 72-inch, stroke 11 ft. She is fitted up in a style of such extraordinary splendour that the cabin furniture and appointments are stated to have cost 30,000*l.*, which is rather more than that of the boat herself and engines!

SUSPENSION BRIDGES.—The bridge invented and patented by Mr. Dredge, of Bath, is coming more and more into notice. Lord Caledon, having seen the one erected in Regent's-park, London, was struck with the advantages which Ireland might derive from the invention, and employed Mr. Dredge to erect a bridge of the kind over the Blackwater, in his lordship's own demesne. From tower to tower the span is about 76 ft.; and yet, from the time that the ironwork was on the ground until the bridge was finished, only eight days elapsed! For Sir James Colquhoun, Mr. Dredge has thrown a bridge across the Leven, at Loch-lomond, 294 ft. long, at a cost of 2500*l.* He also undertook to cross a river in India, for the Government, with a bridge 1200 ft. long, at one span. The cost of Mr. Dredge's bridges is trifling, we understand, in comparison with stone structures, and much lower than wood. By his arrangement of the materials he gets rid of much weight without sacrifice of strength. This is effected by making the links of his suspension chains a diminishing series from the towers to the centre. The suspension bars are also placed diagonally. Thus the bridge is converted into two brackets meeting in the centre—making the connecting link, which may be considered analogous to the keystone of a compression bridge, almost superfluous. Mr. Dredge has recently prepared plans for a pier on this principle at Weston-super-Mare 2300 ft. long; and a bill, conferring powers to carry them into execution, has this week passed the House of Commons.

A CATHOLIC CLERGYMAN AND HOLLOWAY'S PILLS.—A poor person, who had been in a very declining state of health for a considerable time, and had tried all the doctors in his neighbourhood, without deriving the least benefit, has been restored to perfect health in a few weeks by Holloway's celebrated pills, which were presented to the then apparently dying man by a distinguished member of the Catholic clergy. John Thompson, Esq., the proprietor of the *Armagh Guardian*, can attest to the truth of this, as well as other remarkable cures that have been effected in that part of Ireland by the use of this invaluable medicine. Sold by all druggists, and at Professor Holloway's establishment, No. 244, Strand, London.

STEAM TO INDIA VIA EGYPT, MALTA, ITALY,

ALEXANDRIA, AND THE PENINSULAR PORTS.
PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA.

The Peninsular and Oriental Steam Navigation Company BOOK PASSENGERS for CEYLON, MADRAS, and CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, *en route* to Bombay, on the 1st of every month.

A steamer from Southampton leaves the 1st and 20th of every month for Malta, where are steamers to Naples, Genoa, Civeta Vecchia, three times a month. 37

STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR.

A steamer leaves Southampton on the 7th, 17th, and 27th of every month.

Apply at the Peninsular and Oriental Steam Navigation Company's offices, 51, St. Mary Axe, London, where only passages can be secured throughout.

STEAM COAL—WITHOUT SMOKE, as per experiments

made at her Majesty's Dockyard, Woolwich.

CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.) 38

OFFICES—2, MOORGATE-STREET, LONDON.

The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

HALLETTE'S ATMOSPHERIC RAILWAY AND

CANAL PROPULSION COMPANY.—(Completely Registered).

The EXPERIMENTAL LINE OF RAILWAY, at the ROSEMARY BRANCH, PECKHAM, for EXHIBITING the APPLICATION of HALLETTE'S ATMOSPHERIC SYSTEM, IS NOW OPEN. Days of running—Wednesdays, Thursdays, and Fridays, between the hours of Twelve and Four; and Tuesdays from Four to Seven. 39

Tickets may be had at the offices, Winchester-house, 52, Old Broad-street; or of Mr. Smith, Rosemary Branch, Peckham. EDW. J. COLE, Secretary.

LONDON AND OXFORD RAILWAY.—The directors beg

to inform the shareholders, that, in virtue of the powers given to them by the subscribers' agreement, they have THIS DAY DISSOLVED the COMPANY. All shareholders are requested to SEND in their SCRIP forthwith, to be examined; and, on the same being verified, they will RECEIVE FIVE SHILLINGS per share as a FIRST INSALMENT. The balance reserved will be divided *pro rata*, after all claims on the company have been discharged. Two auditors have been appointed to investigate the accounts, which will be submitted to the shareholders with the least possible delay.

By order of the board, E. CLAYTON, Secretary.

N.B.—Forms of application, to be filled up by scripholders, may be had at the office, or will, on request, be forwarded (by post) to parties resident in the country. 40

13, Old Jewry Chambers, London, May 19, 1846.

MIDLAND AND EASTERN COUNTIES RAILWAY—

(CAMBRIDGE TO WEEDEN).—Notice is hereby given, that HOLDERS of SCRIP, to a large amount, in the above railway, are FORMING a SCRIPHOLDERS' COMMITTEE, with the view to INVESTIGATE the AFFAIRS of the COMPANY, and put an immediate stop to further expenditure. Scripholders intending to co-operate, are requested to apply at the Scripholders' Protection Office, No. 11, Bucklersbury, where a meeting will be convened forthwith. GEO. CLARK, Manager. 41

11, Bucklersbury, May 22, 1846.

WEST FLANDERS RAILWAYS.—NOTICE OF CALL.

—Notice is hereby given, that the directors have made a further CALL of TWO POUNDS per share on each and every share in this undertaking, and that the same is made PAYABLE on the 12th day of June next. The proprietors are required to pay the same, on or before the 12th day of June next, to Messrs. Glyn, Halifax, Mills, and Co., bankers, Lombard-street, London. Interest, at the rate of 5 per cent. per annum, will be charged on all sums remaining unpaid after the said 12th day of June; and if any call shall remain unpaid within one month from that date, the shares will become absolutely forfeited, according to the statutes of the company.—Dated this 19th day of May, 1846.

(Signed) W. P. RICHARDS, President.
WILLIAM JESSE, Secretary. 42

11, King William-street, Mansion-house, London.

CAMERON'S COALBROOK STEAM COAL, & SWANSEA

AND LOUGHOR RAILWAY COMPANY.—REGISTERED.

Notice is hereby given, that a MEETING of the shareholders of this company will be HELD, pursuant to the recent sessional order and resolutions of Parliament, at the company's offices, No. 2, Moorgate-street, London, on Monday, the 25th day of May inst., at the hour of One o'clock in the afternoon precisely; and that at such meeting a copy of the Bill now pending in Parliament, to empower the company to construct their proposed railway and branch railway, will be submitted for consideration. 43

And Notice is hereby further given, that all holders of certificates of shares (the deposits in respect thereof having been paid before the 31st of March in the present year) attending at the said meeting, will be required to produce their certificates of shares, and also to allow the denoting numbers of the same to be taken.—Shareholders who cannot personally attend the meeting, may do so by proxy—forms whereof may be had by application at the company's offices. EDWARD M. ELDERTON,

Dated the 11th day of May, 1846. Solicitor to the Bill.

CORNWALL RAILWAY.—At a very numerous and influential

Meeting of the holders of scrip and of bankers' receipts for scrip in this company, held at the Assembly-rooms, Truro, in the county of Cornwall, on Friday, the 15th day May, 1846, in pursuance of the sessional orders of Parliament, at which a copy of the Bill was submitted to the consideration of the meeting (there being represented at such meeting £906,525 of the capital of the company—viz., £880,275, equal to 17,605¼ shares, of £50 each, approving of the Bill, and £26,250 of the capital, equal to 525 shares, of £50 each, dissenting),

JOSEPH THOMAS TREFFRY, Esq., of Place, in the chair. 44

On the motion of Edmund C. Marriott, Esq., seconded by William Mansel Tweedy, Esq.,

It was resolved,—That the draft of the Bill for making a railway and other works from Plymouth to Falmouth, and other places in the county of Cornwall, to be called "The Cornwall Railway," which has been submitted to this meeting of holders of scrip and of bankers' receipts, be approved, and that the committee of management be authorised to prosecute the same in the present session, and to introduce, or submit to the introduction therein, of such alterations, modifications, and additional provisions, as they shall deem expedient or conducive to the success of the undertaking and the interests of the shareholders.

On the motion of the Rev. Frederic Webber, seconded by Dr. Barham,

It was resolved,—That the best thanks of this meeting be given to the committee of management for their great exertions and efficient services; and this meeting beg to express their fullest confidence in their continued efforts to carry the Bill through Parliament.

On the motion of Peter Morrison, Esq., seconded by Captain Frederick Rogers, R.N.,

It was resolved,—That the best thanks of this meeting be given to the chairman, for his able and judicious conduct in the chair.

On the motion of John Ellis, Esq., seconded by Alfred Fox, Esq.,

It was resolved,—That the best thanks of this meeting be given to Mr. Smith for the valuable services he has rendered to the company. J. T. TREFFRY, Chairman.

Dated the 15th May, 1846.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING

AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 45

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

PATENT VULCANISED INDIA RUBBER.

CHARLES MACINTOSH & CO.

Beg to inform the Public that they are the Patentees and sole Manufacturers of the above Substance. The distinguishing properties of the Patent Vulcanised India Rubber are, its uniform elasticity in various temperatures; its not becoming hard on exposure to extreme cold, nor liable to injury by contact with heat. Its strength is greater than that of native caoutchouc; it is indissoluble in essential oils; it resists the effects of oil and grease in different degrees, according to the purposes for which it is manufactured.

Among the various useful applications of the Patent Vulcanised India Rubber, may be enumerated—

WASHERS or RINGS for joints in steam, and water-pipes, and for valves for steam-engines; by which labour is economised, and the joints more effectually made, than by any other mode. 46

ELASTIC BANDS, for holding together bundles of letters, papers, &c.

In ARTICLES of DRESS—Springs for waistcoat-backs and trowsers, straps for trowsers, brace-ends, garters, &c.

In CALICO-PRINTING, the substitute for blanket has been found to produce a much finer impression than the woollen hitherto used, and with considerably less pressure; hence a saving in power, and wear of lapping.

COVERS for furnishing rollers (in lieu of flannel), are perfect for their purpose; and, as the India Rubber does not absorb moisture, they can be easily cleansed, and no colour need be wasted.

FLEXIBLE HOSE for fire-engines, brewers' purposes, gas, &c.

SPRINGS for railway and other vans and carriages, and for buffers and drags

CORRUGATED FELT, for placing between the rails and the chairs of railways, on the sleepers, to take off the ultimate concussion, and to prevent in wooden continuous sleepers the embedding of the rails &c.

Cambridge-street, Chorlton-upon-Medlock, Manchester, April, 1846.

SAMPLES of the above may be seen at 46, CHEAPSIDE, and 58, CHANCERY-LANE.

GREAT BRITAIN MUTUAL LIFE ASSURANCE

SOCIETY, 14, WATERLOO-PLACE, LONDON.

DIRECTORS.

THE CHISHOLM, Chairman | WM. MORLEY, Esq., Deputy-Chairman

HALF CREDIT RATES OF PREMIUM.

The attention of ASSURERS is particularly directed to the Half Credit Rates of Premium, by which insurances may be effected, and loans for short periods secured with the least possible present outlay, and at a less premium than for short terms only, and with the option of paying up the arrears and interest—thus becoming entitled to participate in the *whole of the profit of the institution.* 47

Extract from the Half Credit Rates of Premium.

Age 20.	Age 30.	Age 40.	Age 50.	Age 60.
£0 17 0	£1 1 1	£1 8 2	£2 1 0	£3 4 2

Thus £1000 may be assured at the age of 30 by the annual payment of £10 10s. 10d. for the first five years.

The whole of the profits divided ANNUALLY among the members, after payment of five annual premiums.

An ample guaranteed capital, in addition to the fund continually accumulating from premiums, *fully sufficient* to afford complete security to the policy-holders.

Members assured to the extent of £1000 entitled (after payment of five annual premiums) to attend and vote at all general meetings, which will have the superintendence and control of the funds and affairs of the society.

Full particulars are detailed in the prospectus, which, with every requisite information, may be obtained by application to A. R. IRVINE, Managing Director.

DIRECT BOMBAY & MADRAS RAILWAY COMPANY.

PROVISIONALLY REGISTERED.

Capital £4,500,000, in 90,000 shares, of £50 each.—Deposit 5s. per share,

Being the amount limited by the 7th and 8th Victoria, cap. 110, with the provisions of which Act the company have strictly complied; and no further call until the local surveys have been taken and reported to the shareholders.

PROMOTER.

Capt. Bouchette, C.E., son of the late Hon. Col. Boughette, Surveyor General for Canada.

OFFICES OF THE COMPANY, 38, FENCHURCH-STREET.

The plans, maps, and sections of this line, have been laid before the following most distinguished and influential personages, who have all given their approval of its

IMPORTANCE AND UTILITY.

HIS ROYAL HIGHNESS PRINCE ALBERT, OF SAXE COBURG GOTHA, K.G., G.C.B., &c. &c.

The Right Hon. the Earl of Auckland, G.C.B., late Governor-General of India.
The Right Hon. the Earl of Ripon, President of the Board of Control for Affairs of India.
The Right Hon. the Earl of Dalhousie, President of the Board of Trade.
The Right Hon. Lord Metcalfe, late Governor of Madras, and Governor-Gen. of Canada.
General Lord Aylmer, G.C.B., late Governor-General of Canada.
Gen. Lord Strafford, G.C.B., G.C.H., late Commander-in-Chief of the Forces in Ireland.
The Right Hon. W. E. Gladstone, her Majesty's Principal Sec. of State for the Colonies.
General Sir Howard Douglas, Bart., G.C.M.G., G.C.B., F.R.S., and M.P., late Lord High Commissioner of the Ionian Islands.
General Sir James Caldwell, K.C.B.
General Carpenter, H.E.I.C.S.
Colonel Sir Francis Cockburn, K.C.B., late Governor of the Bahamas.

COMMITTEE.

Major-General Moss, Hon. East India Company's Service.
Mordaunt Ricketts, Esq., late Ambassador to the Court of Oude.
Major-General Watson, C.B., H.E.I.C.S.
Captain Frobisher, H.E.I.C.S.
J. Hodgson, Esq., Oakhill Park, Middlesex.
Captain Gilham, Bengal Service.
Captain Bellew, H.E.I.C.S.
H. Hadding, Esq., Hoobly, near Darwar.
Richard Lucas, Esq., Bromley, Bucks.
W. J. Jerardjee, Esq., Madras.
Thomas Fuller, Esq., merchant, The Elms, near Louth.
With power to add to their number.

CONSULTING ENGINEER—John A. Galloway, Esq., C.E.

ENGINEERS—Captain Bouchette; Walter P. Wade, Esq., late Royal Engineers.

STANDING COUNSEL—Her Majesty's Solicitor-General; Alexander Cockburn, Esq., Q.C.

BANKERS.

London—London and County Bank.
Bombay—Bank of Bombay.
Edinburgh—British Linen Company's Bank.
York and Leeds—Yorkshire Banking Company. 48
Hull—Hull Banking Company.
Bristol—Messrs. Stuckey and Co.
Birmingham—Birmingham and Midland Banking Company.
Southampton—Hampshire Banking Company.
Glasgow—Union Bank of Scotland.
Liverpool—The Liverpool Banking Company.

AGENTS—*Bombay:* Messrs. Nicoll and Co.—*Madras:* Messrs. Binny and Co.

SECRETARY—James Ward, Esq.

PROSPECTUS.

Public attention is naturally directed to the continent of India, in these times of speculative enterprise, as a new and unexplored field for the investment of capital, from the conviction that the yet undeveloped resources of its wealth, its industry, and its productive power, will richly and amply remunerate the speculator.

The millions who people that vast and fertile region of the globe, only require the impulse of enterprise to call forth the almost boundless riches that immediately surround them; and were they possessed of that great artery of civilisation—railroads—the current of their political and industrial strength would instantly become enlarged, not only in volume, but in richness also.

If we glance at the continent of India, we find our power mainly concentrated on three points on the coast, Calcutta, Madras, and Bombay; which form an irregular triangle, the base of which may be termed Madras and Calcutta, and the apex, Bombay; and the great bulk of the wealth and physical power of India is enclosed within that figure, therefore it becomes a matter of the primest importance to have the intersecting lines of our empire as perfect as possible, so that our power may be felt at every point, and our influence extended to every part. From the want of this concentrative power, India has become almost a burden to the mother-country, barely paying its executive administration, in lieu of being a lucrative possession, a wealth-yielding appendage.

To obviate this great and glaring defect in our Anglo-Indian empire, it is only necessary to extend to her the same means of communication that we possess at home; to bring, in short, the great centres of her internal power nearer to each other; and instead of depending upon her rivers as lines of traffic and intercourse, she ought to have a well-arranged net-work of railway extending over her surface; then she would increase in power, and augment in riches. The Direct Bombay and Madras Railway is projected to carry out, in part, this noble scheme; and a single glance at the map must convince the most cautious calculator that the project is well-founded, and the line of route happily chosen to effect its purpose; as it will intersect the most wealthy and industrious provinces of the continent of India, the Carnatic, and Mysore, which abound in natural productions, in manufacturing industry, and in agricultural wealth.

The two great presidencies of Madras and Bombay will be brought within a few hours' journey of each other, and not months, as heretofore; and in lieu of vessels making a long and dangerous voyage of some 5400 miles half round the entire Peninsula of India, their costly cargoes may be easily conveyed to Bombay for shipment, in a less number of hours than the voyage occupies days; thus avoiding all risks of damage, peculation, wear and tear, &c. &c., which in general characterise these voyages. The saving of insurance will also be immense—a matter of first-rate importance.

In a political and military point of view, the line must be of almost incalculable importance, as it will intersect the great depôts of the East India Company, and afford at all times a ready and prompt conveyance for troops, baggage, stores, artillery, and the cumbrous *materiel* which invariably attend their march; and, above all, it will prove of the utmost utility to the Indian Government, in the distribution of their forces among the various military posts of the three presidencies, and for their rapid concentration on any required point, the want of which was so distinctly shewn in the late calamitous events on the Sutlej, and the consequent fearful sacrifice of life.

The district traversed by the Direct Bombay and Madras Railway contains upwards of 30,000,000 of inhabitants; and the wants and industry of this large body already yield a considerable tonnage, although in a comparative state of barbarous communication. In the report of the Bombay *Chamber of Commerce*, we find that the traffic to and from that city amounts to 187,343 tons annually, consisting chiefly of cotton and salt. These two items form merely a fraction of the requirements of the Indians. Bombay is unapproachable except by a dangerous and expensive sea-board, and a cheap and safe communication can alone render available her internal resources. Cotton has now to be transported 500 miles to the coast, to reach Bombay for shipment. A railway would naturally obviate so circuitous and expensive a route. Some idea may be formed of the destruction and delay occasioned by these journeys, when we state that the cotton is carried on the backs of oxen, at the rate of 10 miles per day, which enormously augments its shipment price. The present cost of conveyance from Nagpore to the port of shipment is from 14*l.* to 20*l.* a ton, and the charge by rail of 2d. a ton per mile, would amount to 4*l.* 3*s.* 4d.—a considerable difference. The same facts prevail in regard to silk, and other commodities which are of the first importance to our manufacturing interests.

This line will also bring nearer to us the fine island of Ceylon, with all its rich productions, commencing as it will at Madras, and taking in its course Arcot, Vellore, Bangalore, Oscotta, Baugalore, Sera, Dodairee, Hurrioor, Chitteidroog, Myacunda, Anagee, Hurryhur, Shahnoor, Hullyhall, Hoobly, Darwar, Taloor, Gohank, Rybaugh, Meeruj, Kolapoor, Satara, Poona, Poonah, Tulligaon, Singhur, Callianee, Basseen, Salsette, and Bombay; thus, absorbing the interests and traffic of upwards of 30 first-rate cities, and from 400 to 500 towns, in the most densely populated part of India, facilitating the conveyance of cotton, coffee, tobacco, opium, sugar, silk, senna, gum, cassia, dyewoods, hides, furs, lac, betel nut, saltpetre, spices, firewood, charcoal, coal, corn, and various kinds of grain, indigo, &c., &c., and the imports of treasure, manufactured and other goods, salt, ice, &c. The passenger-traffic alone, according to reasonable and careful calculation, will yield an ample per centage on the capital raised; and the immense tonnage of merchandise and raw produce must insure to the shareholders a profit beyond even the first-rate lines of England. The promoters of the present scheme have received intelligence from their agents, that the line presents no engineering difficulties, and that the cost of construction must be moderate, labour being plentiful, and the purchase of land comparatively trifling, and wood, coal, and iron abounding in the immediate neighbourhood of the whole line. The management of the company will be vested in a board of directors in London, in connection with an influential branch both in Bombay and Madras.

Care will be taken, in the Act constituting the company, that the responsibility of the shareholders shall be limited to the amount of their subscriptions; and 4 per cent. interest will be paid upon the capital advanced up to the time of construction. The directors also beg to call especial attention to the principle by which allottees in this company are protected from an objectionable responsibility, by the condition that their application for shares will not be considered binding upon them, should they afterwards decline to pay the deposits required, at the time specified in their letters of allotment.

A reserve of 40,000 shares will be made for India, which the projectors have much pleasure in stating will scarcely suffice for the demand already made.

Applications for shares, in the annexed form, may be addressed to the secretary, at the Company's offices, 58, Fenchurch-street, and to the undermentioned share-brokers and agents:—Messrs. Joshua Hutchinson and Son, Lothbury; Messrs. Hughson and Dobson, Frederick-street, Edinburgh; Mr. Edward Dickenson, Liverpool; Messrs. Borthwick, Campbell, and Co., Glasgow; Mr. J. R. Massey, 6, Temple-street, Birmingham; Mr. Thomas J. Greaves, St. Ann's-square, Manchester; Messrs. Edward Morgan and Co., Norwich; Messrs. Borthwick and Co., Newcastle-on-Tyne; Mr. W. H. Land, Bristol; Messrs. Turnbull and Maister, Hull; Messrs. Dodsworth and Alderson, York; Messrs. Muncaster and Wilson, Sheffield; Mr. John Caldecott, Bridge-street, Chester; Mr. W. Oliphant, Perth; Messrs. Elsgood and Harrison, Leicester; Mr. J. Clark, Jun., Southampton; Messrs. Tyeth and Luscombe, Plymouth; Mr. Percy Bolger, Gardener-street, Dublin; Mr. Thomas Sandford, Exeter; Mr. W. Miles, Worcester; Messrs. White and Son, Leamington and Warwick; Messrs. Browne and Clarke, Coventry; Mr. J. W. Carr, Colchester; Messrs. Lang and Brown, Glasgow; Messrs. Smyth and Du Bedats, Royal Exchange, Dublin; Mr. Richard Richardson, Halifax; Messrs. Smith and Perfect, Leeds; Mr. J. Hurry, Spalding; Mr. James Stokes, Cheltenham.

May 13, 1846. JAMES WARD, Secretary.

FORM OF APPLICATION.

To the Provisional Committee of the Direct Bombay and Madras Railway.

Gentlemen,—I shall feel obliged by your allotting to me shares, of £50 each, in the above company; and if the deposit be not paid on or before the time specified in your letter of allotment, you may consider this application void.

Name in full .....
Residence .....
Trade or profession .....
Date .....
Reference .....

GRATIS.—A LIST of PATENTS and REGISTRATIONS

for the MONTH of FEBRUARY, may be had (gratis) on application at the PATENT OFFICE, 89, CHANCERY-LANE, or will be sent free, by post, on receipt of two stamps, together with a Prospectus, containing charges and necessary information for PATENTS and REGISTRATIONS.—Further particulars may be had by applying to Messrs. Barlow and Le Capelain, the Patent Office, 89, Chancery-lane. 49

HALEY'S PATENT LIFTING JACK.

MANUFACTURED SOLELY BY
W. & J. GALLOWAY, ENGINEERS,
KNOT MILL IRON-WORKS, MANCHESTER.

The attention of parties who employ LIFTING JACKS, is respectfully requested to the superiority of the above over those hitherto in use. It will lift either at the top or below—having a claw, the same as the rack jack. Its parts are made in the most accurate manner—*each working piece being engine-cut.* Notwithstanding its superiority in point of workmanship, and combining utility, safety, durability, and neatness, the cost is not more than that of the rack jack, of rude manufacture.

Amongst the advantages which it possesses, the following may be enumerated:—

1. It is about *half the weight* of the ordinary rack jack of equal power.

*** This is most important, as the ponderous nature of the rack jack is one of the main objections to it, requiring *two*, and often *three*, men to carry one of moderate power; whereas, one of the improved jacks (capable of lifting five tons), can be borne with ease by *one* man.

2. The handle (working similar to the rack jack) *may be let go with the lift on;* and although it has neither ratchet wheels or any other mode of securing it, it will not run back, but remains stationary, and quite safe.

3. Its parts are few, and simple (made entirely of wrought-iron, and case-hardened).

PRICES. 50

No. 2 size—to lift 2 tons	£6	0	0
„ 3 „ „ 4 „	7	0	0
„ 4 „ „ 6 „	9	10	0
„ 5 „ „ 12 „	12	0	0
„ 6 „ „ 16 „	15	0	0

PATENT IMPROVEMENTS IN CHRONOMETERS.

WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 51

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

SEYSSEL ASPHALTE COMPANY—CLARIDGE'S

PATENT.—ESTABLISHED MARCH, 1838,
FOR WORKING THE MINERAL ASPHALTE ROCK OF PYRIMONT SEYSSEL,
A Bituminous Rock, situate on the Eastern side of the Jura.

PRINCIPAL DEPOTS:
ROUEN, MARSEILLES, AND STANGATE,
Surrey Side of Westminster-bridge, London.

The ASPHALTE OF SEYSSEL has been EXTENSIVELY USED, since March, 1838, for the following useful purposes:—

FOOT PAVEMENTS (public and other)
KITCHEN FLOORS
BASEMENTS—where it is essential to keep damps from rising
GARDEN WALKS and TERRACES
CARRIAGE DRIVES
COACH-HOUSES and STABLING
DOG KENNELS
BARN FLOORS
TUN ROOM FLOORS
MALT-HOUSE FLOORS
PIGGERIES, &c. 52

COVERING OF RAILROAD and OTHER ARCHES
The only effectual mode to prevent the percolation of water, which also renders it very appropriate for the
LINING OF TANKS, FISH PONDS, DRAINS, &c. &c.

Note.—The Seyssel Asphalte Company are prepared to enter into special contracts for the execution of railway work, and other public works of magnitude.

I. FARRELL, Secretary, Seyssel Asphalte Company, Stangate, London.

UNDER THE PATRONAGE OF ROYALTY AND THE AUTHORITY OF THE FACULTY.

KEATING'S COUGH LOZENGES.—A remedy for all dis-

orders of the pulmonary organs—in difficulty of breathing—in redundancy of phlegm—in incipient consumption (of which cough is the most positive indication) they are of unerring efficacy. In asthma, and in winter cough, they have been seldom known to fail.—KEATING'S COUGH LOZENGES are free from every deleterious ingredient; they may, therefore, be taken at all times, by the most delicate female and by the youngest child; while the public speaker and the professional singer will find them invaluable in allaying the hoarseness and irritation incidental in vocal execution, and consequently a powerful auxiliary in the production of melodious enunciation.

Prepared and sold in boxes, 1s. 1½d., and tins 2s. 9d., 4s. 6d., and 10s. 6d. each, by Thomas Keating, chemist, &c. No. 79, St. Paul's Churchyard, London.

Sold by Sanger, 150, and Dietrichsen and Hannay, 63, Oxford-street; Blake, Sandford, and Blake, 47, Piccadilly.—Sold wholesale by Barclay and Sons, 95, Farringdon-street; Edwards, 67, and Newberry, 45, St. Paul's Churchyard; Sutton and Co., Bow Churchyard; and retail by all druggists and patent medicine vendors in the kingdom. 53

RECENT TESTIMONIAL. Dover, January 25, 1845.

SIR,—I have great pleasure in informing you, that the 2s. 9d. box of KEATING'S COUGH LOZENGES, had at your house about three weeks since, has relieved Mrs. Hiller of a bad cough, to which she has been subject many years, especially in the winter season. A considerable portion of the lozenges are on hand, nor has she, for the last fortnight, had any occasion to use them Your's respectfully,

Mr. S. Marten, Dover. F. I. HILLER, Jun.

ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY,
With 25 coloured engravings.

Just published, sixteenth thousand (in a sealed envelope), price 2s. 6d.; or post-paid to any address, for 3s. 6d., in postage stamps, or Post-office order,

SELF-PRESERVATION: A Medical Treatise, on Marriage, and

on the Secret Infirmities and Disorders of Youth and Maturity. Illustrated with 25 coloured plates on the anatomy, physiology, and diseases of the urinary and reproductive organs, explaining their various structures, uses, and functions, and the injuries that are produced in them, by solitary habits and other excesses. With practical observations on the treatment of nervous debility, local and constitutional weakness, syphilis, stricture, and other diseases of the urethra. By SAMUEL LA'MERT, consulting surgeon, 9, Bedford-street, Bedford-square, London, Matriculated Member of the University of Edinburgh, Honorary Member of the London Hospital Medical Society, Licentiate of Apothecaries' Hall, London, &c. 54

REVIEWS OF THE WORK.

"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*

Published by the author; and may be had at his residence; also from S. Gilbert, 52, Paternoster-row; Hannay and Co., 63, Oxford-street; Starie, 23, Tichborne-street, Quadrant; Gordon, 146, Leadenhall-street, London; Newton, 16, Church-street, Liverpool; and all booksellers.

At home for consultation daily, from nine till two, and from five till eight; and all letters, immediately replied to, if containing the fee of £1, for advice, &c.—9, Bedford-street, Bedford-square, London.

Just published, a new and important Edition, price 2s. 6d.; free by post, 3s. 6d.

THE SILENT FRIEND: a medical work, on Human Frailty,

Nervous Debility, constitutional weakness, excessive indulgence, &c.; with Observations on Marriage, &c. By R. and L. PERRY and Co., surgeons, London. Published by the authors, and sold at their residence; also by Strange, 21, Paternoster-row; Hannay and Co., 63, Oxford-street; Noble, 109, Chancery-lane, Gordon, 146, Leadenhall-street; Purkiss, Compton-street, Soho, London.

The CORDIAL BALM of SYRIACUM is a stimulant and renovator in all spasmodic complaints. Nervous debility, indigestion, asthma, and consumption, are gradually and imperceptibly removed by its use, and the whole system restored to a healthy state of organisation. Sold in bottles, price 11s. and 33s. 55

THE CONCENTRATED DETERSIVE ESSENCE.—An anti-syphilitic remedy for searching out and purifying the blood from venereal contamination, scurvy, blotches on the head, face, and body, ulcerations, and those painful affections arising from improper treatment, or the effects of mercury, removing secondary symptoms, and all eruptions of the skin. Price 11s. and 33s. per bottle; also £5 cases.

PERRY'S PURIFYING SPECIFIC PILLS have long been used as the most certain remedy for scorbutic complaints of every description, eruptions of the skin, pimples on the face, and other disagreeable affections, the result of an impure state of the blood. The pills are perfectly free from mercury, capaiva, and other deleterious drugs, and may be taken with safety without interference with or loss of time from business, and may be relied upon in every instance. Sold in boxes, at 2s. 9d., 4s. 6d., and 11s. each, by all medicine vendors—of whom may be had the *Silent Friend.*

Messrs. R. and L. Perry and Co. may be consulted at 19, Berners-street, Oxford-street, London, daily; at 106, Duke-street, Liverpool, every Thursday, Friday, and Saturday; and 10, St. John-street, Deansgate, Manchester, on Mondays, Tuesdays, and Wednesdays.

CURTIS ON MENTAL AND GENERATIVE DISEASES.

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